Alternate Format Production Manual

Susan Kelmer
Alternate Format Production Program Manager
Disability Services
University of Colorado Boulder
Susan.Kelmer@Colorado.edu

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INTRODUCTION

The alternate format process is complex, and student-driven. Understanding the elements contained in this document will help to speed the production process, which is a benefit to the student, and a benefit to the department.

The Alternate Format Production and Access Center (AFPAC) is responsible for the production of alternate format (hard copy and electronic resources). This manual is divided into two parts:

- Request and fulfillment
- Production of alternate format

The Alternate Format Production Program Manager (AFPPM) processes all incoming requests, provides quality control of finished products, and is the primary person communicating with the student regarding their needs. The AFPPM also transmits completed alternate format to the requesting student. The AFPPM supervises the production staff and process as the alternate format is created.

AFPAC

The Alternate Format Production and Access Center is the lab space we use to create and edit alternate format for student use. The AFPAC staff includes the AFPPM and as many as ten student staff working as Student Assistants II – IV. The AFPPM handles the administrative process – intake, assignment of projects, quality control, sending of completed files, and all record-keeping the work process and output. Student Assistants handle the vast majority of production processes, including scanning, conversion through use of Optical Character Recognition (OCR), creation of tactile images, and producing the required output.

This is a student-driven process

Students approved for alternate format of their print materials are responsible for requesting their alternate format throughout their college career with the University of Colorado (CU). Items that are converted and provided for students upon request are:

- Required and optional textbook material assigned by the instructor
- Additional readings that may be handed out in class or uploaded to Desire2Learn (D2L) for student use
- PowerPoint slide presentations used in class
- Reference or supplemental material required for the writing of a paper or completing a project
- Exams and quizzes

First-In, First-Out

The AFPAC provides materials generally on a first-in, first-out basis. Students who request materials first will have their materials worked on before those who request later. Variations to this timeline can occur under special circumstances as determined by the AFPPM or department leadership.

Appendices To This Manual

Appendix materials include the following:

- Sample Alternate Format Consultation Form

- Sample alternate format request forms
- Administrative Process Flow Chart
- Production Process Flow Chart

ALTERNATE FORMAT ADMINISTRATIVE PROCESSES

Background

Students who are approved for an alternate format accommodation meet with the AFPPM prior to receiving alternate format. An Alternate Format Student Consult is conducted. The student is asked a series of questions (see Appendix) to determine their needs and what type of technology and alternate format will best suit them. Two types of alternate format are generally provided to students – electronic or hard copy:

- Text-based PDF documents
- Microsoft Word documents – plain text
- Microsoft Word documents enhanced with MathML code
- Braille
- Tactile graphics

The path a request will take

Textbooks

1. Student makes a request for an alternate format of a textbook.
2. AFPPM fills out a request form and asks for copies of receipts/proof of purchase (see Appendix for copy of form)
3. AFPPM researches the book to gather all information – author, title, edition, copyright year, publisher
4. Files are ordered for the book, or the student is informed that files will not be available and they must provide their copy for scanning)
5. Request form information is entered into Alternate Format Tracker spreadsheet.
6. Request form is filed in appropriate folder for processing
7. Files are received or book is scanned to create files
8. Production of the files into the appropriate format is completed by AFPAC staff
9. AFPPM completes quality check of files
10. AFPPM sends files or completed hard copies of alternate format to the requesting student
11. Spreadsheet is updated
12. Request form is filed in student's AFPAC folder

Handouts or other electronic material

1. Student makes a request for an alternate format of a textbook.
2. AFFPM adds the request to the ongoing request sheet for the student (if no ongoing sheet has been started, one is started at this point). (See Appendix for copy of form.)
3. Production of the alternate format is completed.
4. AFPPM completes quality check of the document.
5. AFPPM transmits completed electronic file or hard copy to the student.

How students request their alternate format

Students can request their alternate format of textbook material in multiple ways.

- During initial intake. When meeting with the AFPPM after approval of the accommodation of alternate format, the student can provide a list of texts required for class reading. This list can be obtained from the student's MyCU records, from an in-person meeting with their instructor, from an email from their instructor, or from a search of the CU Bookstore website.
- Via email after registering for classes. Student can email a screen shot, or cut and paste information, from their MyCU account after registering for classes. Student can also just type a list of the books they need in an email.
- Via phone or in person visit to the AFPAC.

Students requesting alternate format of textbooks need to provide the following information:

- Title of book
- Author's last name
- ISBN number from the copyright page or bar code area on the back of the book

Students who have requested alternate format of textbooks cannot receive files until they have provided proof of purchase/ownership of the textbooks they are requesting. Copyright law prohibits the Disability Services office from providing alternate format unless the student has purchased a hard copy of the text. This can be a new or used book, purchased from any source they choose. The AFPAC does not need to wait until a student has purchased their books before beginning the process of acquiring/converting textbooks. This can be done at any time after the request has been made by the student. Files will be held in lieu of proof of purchase/ownership.

Production timelines for textbooks

The time required for production of alternate format materials varies. Students are informed that production can take up to 6 weeks, and in some cases longer, depending on type of output and quality of original document. In some cases, part of the production time is actually waiting time while we await the receipt of files from the publisher or the arrival of a hard copy of the book for scanning. AFPAC strives to provide all alternate format of textbooks within 2 weeks of the request, and within four days for individual pieces (handouts, D2L uploads, PowerPoint slides, etc.)

Alternate Format Request Form

Each request for a textbook results in a form that follows the book through its production cycle. (The form is located in the appendix of this manual). The form has space for:

- Name of student
- Date of request
- ISBN, Title, Author, Edition, Copyright Date, and publisher information
- Where files requested from
- What format file received
- Who worked on the production of the alternate format, and the dates/time of completion
- What method was used to deliver the format to the student
- Notes section

Forms are filled out as books are requested, and move through the production process. When the final product is produced and sent to the student, the form is filed in the student's folder in the AFPPM's office.

Researching requested books

Using the information provided by the student regarding their book, the AFPPM will research the book to gather the following information:

- Author
- Title
- Edition
- Copyright Date
- ISBN number
- Publisher

The best resource for this information is going to be Amazon.com, which currently has the best book database in the world. If not enough information is received from the student to locate specific details on the book, the CU Campus bookstore website can also be consulted. The bookstore website is www.cubookstore.com.

The complete information can then be added to the Alternate Format Request Form.

Acquiring electronic text of textbooks for conversion to required format

After a student has requested alternate format for a textbook for a course, the following steps occur.

1. Requested book is searched on Amazon.com for complete information – title, author, ISBN number, edition, year of publication, and publisher name.
2. Book information is entered on the Alternate Format Request Form (see appendix). Form includes student name, date of request, type of format requested/needed, and complete book information.
3. Book information is also entered onto the current semester's Alt Format Tracker for the current semester. The Alt Format Tracker is located on the ATLab file share under the Databases and Alternate Format IS folder.
4. If a book is older than 2008, it is assumed that there will not be alternate format available from the publisher. See below about acquiring a hard copy of the text.
5. Book information is compared to ATLAB share to determine if files for the book are already available. \\UCBFiles\ATLab\shared\scanned\AAA All Books

    a. If files for the book are already in the AFPAC repository, they are queued for delivery to the student upon provision of proof of ownership. See "Sending Files to a Student" section below for more information.
    b. If files for the book are not already in the AFPAC repository, move to step 6.

6. Publisher or database is contacted to provide alternate format. See Appendix B for URL, Username, and Password information for the below-listed sites.

a. ***AccessText Network*** (aggregate request site) if it is one of the following:

1. Bookland Press
2. Cengage Learning
3. Charles C. Thomas, Publisher
4. Cicero Books
5. Construction Trades Press
6. Dunedin Academic Press
7. Elsevier
8. F.A. Davis Company
9. FIT Publishing
10. Human Kinetics, Inc.
11. Jones & Bartlett Learning
12. Kogan Page
13. Labrynth Learning
14. Lynne Rienner Publishers
15. Macmillan Higher Ed (Higher education books only)
16. McGraw-Hill Education
17. Morton Publishing Company
18. OpenStax, Rice University
19. Pearson Education (plus imprints)
20. PlanningShop
21. Pyrczak Publishing
22. Quintessence Publishing
23. Ramsey Education Solutions, The Lampo Group, Inc.
24. Rodale Books
25. RosettaBooks
26. Sage Publications, Inc.
27. Sinauer Associates
28. Springer Publishing
29. W.W. Norton
30. Wiley
31. Wolters Kluwer/Aspen Publishiers – Legal Education

To request a book from ATN, locate it using the ISBN finder, then fill out the online form to complete the request. Files will be delivered either through the ATN portal (the ds-atlab email account will receive notifications that the files are ready for download) or through a link sent in email. Once files have been downloaded/received, the request can be marked "received" on the ATN portal. It can take anywhere from a few hours to a few weeks to receive files from the publisher through ATN.

b. ***Bookshare*** *(DAISY or Braille format)* for the following. Bookshare generally includes only text-based books, rather than those with graphic content (such as STEM materials):

1. Penguin (and all imprints)
2. Random House (and all imprints)
3. Many classics, older works, and common works (Shakespeare, the Greeks, the Romans, etc.)

To order a title from Bookshare, first locate it through their search engine. Do not use an ISBN number to search, but instead search by title of book and author. Once the book is located and you have clicked the download button, you must then assign the book to a student. Choose any student on the list; all of them are valid for download. Then click "download" at the bottom of the page. On the next page, you will need to click "download" again. On the next page, once "available" appears, you can then click to actually download the book.

Bookshare downloads require that you have an approved account, and one can be provided by the AFPPM. There is no general-use account for Bookshare.

c. ***Taylor and Francis (including imprint Routledge)***

1. Fill out form stored in \\ucbfiles\ATLAB\shared\scanned\Publisher Contact Information
2. email the form according to the directions on the form – this is critical

d. ***Oxford University Press***

1. Fill out form stored in \\ucbfiles\ATLAB\shared\scanned\Publisher Contact Information
2. email the form according to the directions on the form – this is critical

e. ***Bibliovault*** provides alternate format at a cost of $8 per request. This cost is paid via the AFPAC budget. The AFPPM approves all payments and submits to ODECE's Finance Specialist. A list of the publishers Bibliovault supports can be found here:

http://bibliovault.com/BV.presses.epl

Generally, Bibliovault provides texts from University and professional trade presses. To request alternate format from Bibliovault:

1. Locate the book by typing the ISBN in the search box.
2. Click on the search return to open the information page about that book.
3. Click on "Request Accessible File" link.
4. Fill out the form according to the directions, and submit.

The files will arrive by email within 14 days.

f. ***Other publishers not so far listed***

1. A list of publishers and their request information can be found on the AFPAC server, at \\UCBFiles\ATLAB\shared\scanned\Publisher Contact Information\publisher contacts.doc. This file is constantly updated as new information becomes available or contact information changes.
2. Publisher Lookup can be used to locate information on contacting a publisher. It is located at www.publisherlookup.org.
3. Google the publisher name, and look for anything about alternate format/disability requests and follow their instructions. This is usually under the "rights and permissions" part of their website. If they don't mention it at all, use their "contact us" form or email to contact them directly. See Appendix C for an example email for the appropriate wording.

g. ***Special instructions for course readers.***
Course readers are sometimes the required reading for classes. These are created by an instructor, department, or division, and include an assortment of poorly-scanned readings taken from books, news and magazine articles, and library databases of journals, all bound together with a spiral. They may also include a syllabus or other instructional material. They are not available as electronic copies from publishers. These must be scanned and repaired by hand. There are two ways to get copies of course readers:

1. Contact the instructor of the course and ask for a hard copy of the course reader for scanning. The spiral can be easily removed for scanning, and replaced just as easily when the scanning is completed.
2. As the student to bring in their copy of the course reader, which can be unbound for scanning, then rebound and returned to the student.

h. ***Publishers who will never provide alternate format:***

1. Cambridge University Press
2. Waveland Press
3. Guilford
4. Hackett
5. Harvard University Press
6. Rutgers University Press
7. Penguin (and imprints)
8. Random House (and imprints)
9. Perseus

There are others, and this list is always changing.

7. When the publisher does not respond, or responds that the book is not available, the last resort is to ask the student for their copy of the text for scanning. This does place the burden back on the student for providing the hard copy of the text, but most books can be re-bound with a spiral bind

when the scanning and conversion are complete. When the AFPPM discovers that the student will need to provide their copy for scanning, the student is informed by email, and the request is on hold until the student responds.

a. Book is taken to the print shop to be de-bound (binding is cut off)
b. Book is scanned in AFPAC.
c. If book is a paperback, it is taken back to the print shop to be re-bound with a spiral.
d. If book is a hardback, it is taken back to the print shop to be three-hole punched, or spiral bound with a laminated card-stock cover.
e. Book is returned to student.

Alternate Format Tracking spreadsheet

After completing the research and requesting files from the publisher, all Alternate Format Request Forms are recorded on the electronic Alternate Format Request Tracker for the current semester. The tracker is located in the file share:

\\UCBFiles\ATLAB\shared\databases & alternate format IS

The Alternate Format Tracking spreadsheet includes sections for request dates, completed dates, level of difficulty, type of file sent to student, etc. The sections of the spreadsheet are self-explanatory.

Processing folders/locations for in-progress requests

Once the Alternate Format Request Form is filled in, files ordered, and the form entered in the spreadsheet, the form goes to one of four places.

In AFPPM's desk file drawer:

- Red folder – waiting for publisher response
- Yellow folder – publisher will not be able to provide files, so AFPPM is waiting for student's response
- Green folder – files are available and ready for pickup, but student has not provided proof of purchase yet

In the main file cabinet under the copier, first drawer:

- Lefthand bin: Work to be done, the oldest on the bottom.
- Right-hand bin: Work in progress

After Alternate Format Form has been processed

After the Alternate Format Form has been processed, and files ordered, AFPPM sends the student an email listing where the books are in the process and letting them know if there are books they need to bring in for scanning.

When files come in from publisher, or files are scanned for a student

All book files received/scanned go into our AFPAC server space located at:

\\UCBFiles\atlab\shared\scanned\AAA All Books

Each book has a folder created for it.

Folder Naming Convention

Book folders are listed by their title, edition, author, and ISBN number, in the following format:

World According to Garp 5th - Irving - 9780345366764

When files for a book are downloaded, a folder must be created for the files to go into. This naming convention applies to all books. In the case of Bookshare downloads, where an ISBN is not available, then the folder created should read:

Dialogues of Plato – Plato – NO ISBN

Even if a book has "A" and "The" in front of the title, please don't includes those on the folder names.

Subfolders

Inside the book's folder can exist several subfolders. The folders indicate the type of file and sometimes the source of the file. The following folders may exist:

PUB files. These are files downloaded from a publisher. They may or may not have been altered, and are almost always PDF files.

PDF Scans. These are books that were scanned in AFPAC. The files may or may not have been altered, and will always be PDF files

WORD. These are word files that were created through conversion to alternate format for a particular student.

TIF. An older file type of scanned document, usually created in-house. TIF files are no longer used in the AFPAC.

Word with Math, Word Lean, or Word ML. These files have been produced with MathType or Scientific Notebook and are accessible for blind students using a screen reader to do mathematical equations.

There may be other file types, but these are the most common.

Additionally, there may be zipped files within the book's base folder. These are the completed files ready to send to the student. The name of the file will always be the name of the book and edition, plus the files' type (PDF, Word, etc.). For example: World According to Garp PDF files.zip.

File Names

File names for books' chapters and sections are named by the author's last name and the chapter number or book's section number. For example:

Martin Chapter 03.pdf
Bowles Front Matter.docx
Sanderson Appendix D.pdf

On rare occasions, a book has no author, or is broken into parts, sections, etc., instead of chapters. In the case of a missing author name, the title of the book is used. "Section" and "part" can be used to identify the part of the book in that particular file. For example:

Quick And The Dead Chapter 01.pdf
Thompson Part 1.docx

Assigning text for production

Once files are received from the publisher or database, or the book received for scanning, the Alternate Format Request form is noted with the file type and date received, and instructions on what is to be done to convert those files for use. Example instructions might read:

- Break into chapters
- Rename chapters
- Crop
- Turn into Word files
- Scan and break into chapters
- See Syllabus for order of production
- Turn into Word with MathType

Once the Alternate Format Request Form is marked with the notes for conversion, it is placed in the bin for "do next" for student production staff. The bin is located in the first drawer of the main lab file cabinet (under the printer) on the left-hand side.

NOTE: Blind students should not ever receive PDF or other image-based files, for any reason. Word files should be produced for those students.

Purpose of hard-copy Alternate Format Request Form

The purpose of the hard copy of the Alternate Format Request Form is to keep track of the process the book makes through our acquisition and conversion/production cycle. The form follows the book's track from request to completion of production and final dispensation of the converted materials.

During the administration process, the Alternate Format Request Form resides in one of three statuses. They are kept in folders in the file drawer of the ACAP's desk.

1. Waiting for publisher. Forms in this folder are waiting for the publisher or other source to provide the files. (Red folder)
2. Student Response Required. Forms in this folder are waiting for more information from a student, or waiting for the student to provide a hard copy of the book for us to scan. (Yellow folder)
3. Ready for Pickup. Forms in this folder are completed conversions or available files, but the student has yet to provide receipts/proof of purchase.

During the Production Process, the Alternate Format Request Form resides in one of two statuses. They are kept in two bins in the first drawer of the main AFPAC file cabinet.

1. Work On Next. These are requests that should be picked up as previous requests are completed. Since we work on a First-In-First-Out process, work is chosen from the bottom of the bin first.
2. In Progress. These are requests that are currently being worked on. Multiple student staff may be working on the same request at the same time. The back of the form is used to track progress.

In addition to having the forms as a reference, it is also used to keep notes or information about the book and its production. The blank back side of the form often is covered with production notes, information, and times of production information, which will be used later to complete the front side of the Alternate Format Request Form.

When the production process is complete, the form returns to the possession of the AFPPM for final completion of the process.

Quality Control

After files have been converted or edited as requested, the AFPPM does a random check of several files to be sure that the requested edits were made. If a file fails QC, then it is returned to the student staff who completed the work, with instructions for revision.

Preparing Files To Be Sent to the Student

Generally, the converted/edited textbook files are compressed as a group into one .zip file, and named by the title of the book and type of files. For example:

Valley of Death PDF files.zip
Tale of Two Cities Word files.zip

Some students prefer to access files through the server using their login, which means they are not compressed, but are left separate.

To Compress files to send to a student

Locate the files in the book's folder. Select all of the files you want to compress (Control + A will select all inside the folder). Right-click any one of the files and choose Send to, Compressed File. Depending on the size of the files, compression can take as little as a few seconds or as much as several minutes. Once the compressed file has been created, rename it, using the title of the book and the type of files (see example above).

Sending Files to a Student

Virtually all files are sent to the student via the Large File Transfer Service.

http://filetransfer.colorado.edu

The ds-atlab email can be used to log in and send files (See Appendix B for information on login and password information). Files should only be sent to a student's Colorado.edu email address, and not to an outside or personal account that belongs to the student. This is for copyright and tracking purposes.

For students with blindness, sending files through email is more effective and easier for them to access. Send the zipped Word files directly to their Colorado.edu email address.

Students can also pick up files in person by bringing a flash drive to the AFPAC.

Wrapping Up the Textbook Request Process

The AFPPM initiates the process with the Alternate Format Request Form, and needs to complete the process when the files are sent to the student. When student staff complete the conversion/editing process, they complete the form with their initials, date started and ended, and how many hours or partial hours were spent creating the alternate format.

Information from the form is entered into the database (Alt Format Tracker), including a level of difficulty of the conversion (scale of 1 to 5), date and type of file sent to the student, and marking the work "complete."

The difficulty of conversion scale is as follows:

Rating	Definition
1	Files already in hand, no changes or edits needed.
2	Minor editing required – rename files, crop files, or break a large file into smaller files
3	Moderate editing. Original is clean, but output must be in Word format
4	Major editing required. Original is messy, output may be Word or Math.
5	Major editing, production of tactiles and Braille required

Once a request is complete, files sent to the student, and spreadsheet updated, the form is filed in the student's folder in the top drawer of the large filing cabinet. Please note: a request is not complete until the file is delivered to the student. Occasionally, a student will never come forth with their receipt for purchase, and at the end of the semester, all such requests are marked as "deferred" and filed in the student's folder. All such requests reside in the green folder in the AFPPM's desk.

Ongoing Processes

Throughout the life cycle of a request, there are ongoing tasks to complete, mostly for the purposes of keeping a particular request on track.

Waiting on publisher response. When a publisher doesn't respond within a couple of weeks, a determination needs to be made about whether to re-request the files for the book, or look for them elsewhere.

Waiting for student response. When a book's files aren't available from the publisher, and the student has been asked to provide their copy for scanning, a maximum of two weeks should go by before requesting the book from the student again. A second request can come at two weeks, and at 4-5 weeks after the last request, it should be marked "deferred" and filed in the student's folder. The spreadsheet should be updated at that time, as well.

Waiting for student's receipts/proof of ownership. A reminder can be sent to the student at 2 weeks, and again at 4, before the request is marked deferred and filed in the student's folder. The database should be updated at that time, as well.

Periodic sending of files. Sometimes, the scope of the book plus the complexity of the needed output can make production time extremely long, up to and including the full length of the semester. During a project such as this, as files are completed, they are sent to the student.

Updating students on progress of conversion. If acquisition and/or production of a textbook is going to take longer than the expected two weeks, the student will need to be updated on the process.

What About All Those Handouts and Power Point Slides?

Students can request alternate format of handouts, power points, and D2L materials in multiple ways.

- Via email. Student can download and send their materials from D2L to the AFPAC email address, ds-atlab@colorado.edu
- Via flash drive or portable media. Student can download and save documents from D2L to a flash drive or other portable media and drop it off at the AFPAC

The process for producing and recording individual pieces of works (i.e., not textbooks) is less complex, and generally the process happens much more quickly. Individual pieces have a turnaround time of four days or less. When requests come in, they are prioritized by due date and assigned to student staff based on prioritization of existing workload. A tracking sheet is created for each course for a student, as needed.

Files are processed and edited, and returned to the AFPPM. The AFPPM then checks for quality, and sends the repaired document back to the student who requested it. Files are stored in the ATLAB share, in the student's folder.

A record of individual pieces is kept in the Alt Format Tracker spreadsheet, under the correct tab. The spreadsheet is not filled in until the end of the semester, when all of the semester's work has been completed.

ALTERNATE FORMAT PRODUCTION PROCESS

Introduction

Production staff are hired to assist in the completion of alternate format projects. Depending on type of output, some projects take weeks or even months, while others only take a few days. All student staff can produce all types of output:

- Text-based PDF files from scans
- Text-based PDF files from publishers, with edits
- Word files produced from scans or files from publishers
- Word files with MathML or equations
- Tactile graphics
- Braille

Following the Paperwork Trail

Any student staff taking on a textbook or article conversion needs to keep track of the work using the Alternate Format Request Form (book) or Individual Articles Request and Tracking Form. These are the forms written by the AFPPM and left in the drawer for production.

Alternate Format Request Form

- When you begin working on a project, place your initials in the "Worked on by" section, and add the date you begin the work.
- When you finish a project, enter the "date ended" and how long it took you to do the project. This can be ten minutes, an hour, or multiple hours. Round to the nearest 10.
- Place the form face down on the AFPPM's desk for final processing.
- If you need to leave before finishing a project, on the back of the form please list the portions you have completed, and date them and initial them. Place the form in the right-hand bin in the top drawer of the filing cabinet. You can pick up the work next time you are in.
- Sometimes, an urgent project that you may have been working on will be reassigned by the AFPPM to a different staff member to speed the process. Also, some projects will be assigned to more than one person for completion.

Individual Articles Request and Tracking Form

- There may be multiple articles listed on the request form. Please start with the topmost article and move down from there, unless otherwise directed.
- Place your initials on the "Worker Initials" box next to the article when you start it. Do not fill in "date completed" until the article is complete.
- If you have to leave the lab before you have finished an article, place the form in the right-hand bin in the top drawer of the filing cabinet, and pick up the work when you return.
- Once you pick up an Individual Articles Request and Tracking Form, it is your responsibility to work through the articles on the list, unless otherwise instructed.
- As you finish articles, please inform the AFPPM so that the files can be checked and sent.
- Once a form is complete, place it face down on the AFPPM's desk for final processing.

Cutting and scanning of books

Cutting

All books needing bindings removed for scanning are taken to the print shop, located on the third floor of the 11th gate of Folsom Field. The cutting is performed on the spot so the book can be returned immediately to the lab.

Scanning – Scanfront Scanner

The Scanfront scanner is located on the file cabinet in the AFPAC. Scanner can accommodate up to 1/8th inch of pages at a time. The scanner runs an OCR (Optical Character Recognition) on the pages as they scan, turning them into readable PDFs.

1. Place pages in the scanner face down, top-first.
2. From the display screen, choose Scan to File.
3. Choose Stratus-5.
4. Double-check settings (color or b/w, duplex or simplex)
5. Choose Next
6. Choose Start

Scanner will scan each page, and when finished, save the file in the "Scanfront" folder on the machine marked Stratus-5. Continue scanning until all of the book is scanned.

Once files are scanned:

1. Create Folder on the ATLAB server for the book. Naming convention should be book title edition – author – ISBN number.
2. Create sub-folder called PDF Scans
3. Move files from Scanfront to the newly created subfolder

Books that belong to a student need to be re-bound and returned. Cut books can be taken to the print shop at any time to be re-bound. The process takes two days, so it must be dropped off, then picked up later.

Post-Production of Scanned Files

Scanning results in a collection of files with numbers for names. The scans need to be put together into one file, then broken out by chapter. See the section on Adobe Acrobat Professional for instructions on how to complete this process.

Adobe PDF

Renaming PDF files

When files are received from publishers, they sometimes come as a collection of files, broken into chapters and front/back matter, but with names that don't match our naming convention. These files must be renamed before we can send them to the student.

1. Locate the book's folder on the ATLAB server. Open the subfolder labeled "PUB files."
2. Right click on the file name of the individual chapter, and choose rename.
3. Use our standard naming convention: author name chapter number.
4. Hit return.

Do this for each file, naming as appropriate.

Combining PDF files

When a book is scanned in the lab, the collection of scans may be in order from front to back, but not broken into chapters. In order to break into chapters, that collection of individual files first needs to be put back together.

1. Open Adobe Acrobat Professional.
2. From the loading window, choose "Combine Files into PDF," or go to File, Create, Combine Files into PDF.
3. In the "Combine Files" window, you can either add files (browse to the file location and choose the files you want to add) or you can click and drag files from an open file explorer window to the combine files window.
4. Click Combine files.
5. Save the new document, titling it the name of the book.

Breaking up PDF files

When files are received from publishers, or we've scanned the book and combined the files, we need to break the book into manageable pieces for the student. This is done through extracting what you want for each individual file.

1. Open Adobe Acrobat Professional.
2. Open the file you need to break up.
3. Turn on the Page Thumbnails view in the left-hand pane. This will show you all of the pages in the book in thumbnail form.

Scroll through the thumbnails to get a feel for how the book is broken up and what the first page of a chapter looks like. The next step is to extract the pages so that they can be saved separately into chapters.

1. Select the first page of the section you want to extract.
2. Scroll to the last page of the section you want to extract.
3. Holding your shift key down, select that last page. This will highlight all of the pages between the first selection and the last selection.
4. Right-click on any of the selected pages and choose "Extract."
5. A dialogue box will confirm that this is what you want to do. Select the OK button.

6. A new Adobe Acrobat window will open and your extracted pages will be in that window.
7. Select file, save, and save the file in the same folder where the original large file is. Give it the appropriate file name. Close the newly created file
8. Repeat this process until you have extracted all chapters, front matter, and back matter.
9. Close the large file when complete.

A note about what parts to extract separately.

Most of the time, you can extract the entire front matter as one document. However, if there is an extensive Introduction, you will need to extract it into its own file. Likewise with back matter, the index may need to be extracted into its own document.

Cropping PDF files

Some files from publishers arrive with crop marks in the corners, and extraneous file information in header or footer areas. Likewise, scanned documents may also have margin information that needs to be removed (like holes from punching, or an overscan that shows up as a black line. This information should be cropped from the file before it is considered complete.

1. After opening the file that you need to crop, reduce the page size until you can see one complete page inside the window. This can be done by holding down the control key and scrolling the mouse, or by using the zoom window in the menu.
2. Turn on the tools menu on the right-hand side, and choose the Pages tab.
3. Choose the crop tool from the Pages list.
4. Using the crop tool with click and drag of your mouse, highlight the area of the page that you want to keep. The extraneous items should show up outside the box you just drew.
5. Place your cursor in the center of the box you drew, and double-click.
6. A dialogue box will open. Check the "All" radio button under page range, then OK. This will crop all of the pages in the document.
7. Save the document.

Other Functions in Adobe Acrobat Professional

Checking for readability

A PDF document is only readable if it is text-based. To check for readability, try to click and drag to select text. If you only get a blue or grey box, and no selection of words, the PDF is not text-based and will need to be run through Optical Character Recognition and turned into a Microsoft Word file. See Omnipage section below for instructions.

Omnipage

Omnipage is used to run Optical Character Recognition (OCR) on a file that is not text-based, or that is text-based, but needs to be converted to another file type (such as Microsoft Word or Braille). Omnipage will scan through a document and mark what it believes is text, and what it believes is a graphic. It also marks passages it thinks are tables. Text is marked with a reddish-brown outline, graphics with a green outline, and tables with blue outlines.

Omnipage will perform OCR on any image-based file (PDF, JPG, TIFF). The quality of the output depends greatly on the quality of the original scan.

There is a "quick convert" function that should be used first, before going all the way into Omnipage. Most conversions can be done using the quick convert function.

Quick Convert Function

1. Open a file explorer window and navigate to the PDF file you want to convert.
2. Right-click on the file, and choose Omnipage, then Convert to Text.

3. All the conversion to run, which should only take a few minutes at most.
4. Resulting .txt file will be located in the same directory that you chose the PDF from.

Opening and Using Omnipage

1. Omnipage can be opened from the all programs menu, or there is a link on the desktop.
2. When Omnipage opens, you will see a menu, a row of buttons, and then a second row of larger buttons. That second row of buttons is what you will be accessing.

3. Click on the 1-2-3 button. Omnipage will bring up a dialog box for you to choose where the file is located. Navigate to your file and click "open."
4. Omnipage will then do its best to run OCR on the file. You may see a spell check dialog box appear; you can close it.
5. Once Omnipage has finished scanning the document, it will ask you to save it.
6. Save the file as a doc or docx. There should be (or you should create) a folder for the Word files, in the root of the book's folder.

If a document is a poor scan, you can take extra steps to clean the file before you save it.

1. Open Omnipage, start the process (1-2-3 button), close the spell check, and let the scan complete.
2. When Omnipage asks you to save the file, click cancel.
3. Turn on the editing delete tool. This is a red "x" on the page image bar that shows between the Thumbnails and Page Image spaces on the window.

4. Using your mouse, click and drag around areas that you want to delete from recogntion. The delete tool, once activated, deletes whatever is inside the selection.
5. You can use your mouse to drag handles of text boxes to enlarge or shrink them.
6. You can use the delete tool to get rid of graphics, as well, or you can right-click on a graphic and choose delete.
7. Once you have adjusted text panes and deleted graphic panes, you will need to re-scan the document with the changes. To do this:
    a. Click in the "Thumbnails" pane and then press Control + A. This selects all of the pages for rescanning.
    b. Click the third button, "Automatic." When the dialog box asks if you are sure you want to run the scan again, click okay.
    c. Cancel the spell check window if it pops up.
    d. Once scan is complete, click the fourth button "Save to files" and save the file.

Closing Omnipage after you are done extracting files

When you close a file or close Omnipage, it will ask if you want to save the document. You should say "no," as it wants to save the resulting OPD document, and we do not keep those. The extracted Word file is all we need.

Editing in Microsoft Word

All files extracted from Omnipage need another layer of editing before they are ready to be sent to a student. This requires careful comparison of the original image file (usually a PDF) to the extracted Word file. You will need to create heading levels where appropriate, add in page numbers and page breaks, and re-format tables. For some documents, you may need to re-insert graphics if the student requests them, and for some of those graphics, you will need to add alternate text to describe the image. All of these steps are outlined below.

Steps to Begin Editing in Microsoft Word

If you were able to quick-convert the PDF to a text file, you can skip to the section on "What to Edit and How." If you opened and used Omnipage to create a Word file, you will need to do steps 1-5 below before moving on to text editing. The purpose of this step is to remove any remaining formatting from the extracted document and only needs to be done if you are starting with a Word or .RTF file.

1. Open the Microsoft Word document you extracted from the image file with Omnipage.
2. Choose file, save as, and save the file as a plain txt file (the file extension should show up as .txt). You make this choice in the "files of type" drop down menu. Keep the file's same name.
3. Close the document (File -> Close). Do NOT close Microsoft Word.
4. Choose File, Open to reopen the .txt file.
5. Select Control + A, then click the "normal" style from the home ribbon.

Now you are ready to actually edit the document. Using the original image file to compare to, you will need to check for spelling problems, missing words, and re-add page breaks. Page numbering needs to be added to the top of each page in the "headers and footers" under the Insert menu.

What to edit and how

To add a page break:

Place your cursor at the end of the sentence where you want to place a page break. Hold down Control and press the enter key.

To add page numbering:

1. Choose Insert, Page Number, Top of Page, and choose the first one on the list – left justified.
2. Type the word "Page."
3. An automatic page number will appear. If you need the page number to start at a different number, choose Page Number, Format Page Number, and the enter the page number you wish the document to start at in the dialogue box. Click OK.

Correcting a scanned document is more about looking for patterns than it is about reading the actual material. Some things to look for:

- Red underlines (potentially misspelled words)
- Blue underlines at the beginning of a line (can indicate that there is an extra paragraph mark that needs to be removed on the previous line)
- Blue underlines in the middle of sentences or paragraphs (can indicate an extra space or poor choice of word use that can indicate a missing word)
- Green underlines (same as above)

- Blank lines with no text (can indicate that there is an extra paragraph mark that needs to be removed on the previous line)

Tools that you can use to help your process:

- Turning on show/hide can tell you where hard returns and extra formatting may exist. The tool is a toggle on the Home ribbon and looks like the "paragraph" symbol (backwards P with an extra line).
- Find and replace. If the document shows that Omnipage consistently got a particular set of letters wrong, a find and replace will fix all of them in the document. Be cautious using this tool, however.
- Undo feature. If you change something and didn't mean to or realize it made the document worse, undo is your friend. There is an undo button on the upper menu (looks like a backwards spinning arrow) or Control + Z will do it. You can undo back as many as 50 actions.

Page Numbers and Page Breaks:

In a textbook, we want to maintain page breaks and their corresponding numbers as they are in the original image file, whenever possible. If the text will not fit on the page, here are some tricks to try.

- Reduce the font size.
- Reduce the margin size. You can set the margins to half an inch, if you need to. The margin size adjuster is in the Page Layout ribbon.

Broken words at the end of a page/beginning of a page:

- Do NOT allow words to break across pages. This interrupts the flow of reading. If words have been broken with a hyphen, remove the hyphen and put the word back together, and put the page break in after the complete word.

Footnotes:

Footnotes need to be placed appropriately in textbook files. Use the References ribbon to do so. This is a pretty simple process but requires cutting and pasting of footnotes into the footnote section you add.

Styles and Headings

Almost all textbook material has styles and headings in the original image files. Headings create both visual and electronic navigational "clues" to students using technology to read their material. All files created in the lab will have their heading structure before being sent back to the student for use.

Examples of headings are throughout this manual. The text you see in blue with special formatting that announces each new section or sub-section of this manual are applied heading styles. In Word, you can see the heading styles (and the neat outline it creates) by going to View and clicking the check box for "navigation." This opens the sidebar for the document. Keeping this sidebar open during your editing will help you keep up with your styles and how they should be progressing.

Headings do not translate in the OCR process, and need to be added back in. What had been headings before are now just plain text. Heading styles are located in the Home ribbon, starting with "Normal" and expanding to multiple layers of headings. The appropriate template has already been installed on all of

the lab computers, so that no matter what computer you are on, you will have the same style set to work with. Here are the most common styles you will use:

- Title. Used only once in a document for the title of the chapter.
- Heading 1. First heading below the title level.
- Heading 2. Second heading below the title level.
- Heading 3. Third heading below the title level.

You can use up to 6 levels of headings in a document. The preference is to go no deeper than three.

Short cuts to apply headings:

- Heading 1: ctrl + alt + 1 (use the 1 above the keyboard, not the numbers on the keypad)
- Heading 2: ctrl + alt + 2
- Heading 3: ctrl + alt + 3

There are no short cuts for heading levels below 3. You will need to us the heading buttons on the Home ribbon to apply levels 4, 5, and 6.

Bullets and Numbering

Use the bullets and numbering feature for lists in documents.

Saving File When Finished

When you have completed editing the file, or need to finish the file later, choose File – Save As. Save the file in the WORD folder you created earlier. Keep the file name, but in the files of type, select .doc or .docx as the file type.

Turning Word files into PDF files

Some student prefer PDF files, even though we've had to create accessible Word files in our process due to a poor scan. To save as PDF:

- Save your repaired document as a Word file (.doc or .docx) in the appropriate folder.
- Choose file, Save as
- In the Save as Type, choose PDF
- Click the Options button
- Make sure the "Create Headings Using" selection is checked, and the "Bookmarks" radio button has been selected.
- Click Okay
- Click Save
- In the dialogue box that comes up, navigate to the PDF folder (if there isn't one, create one yourself) for that book, and save the file there using the same file name as the Word document.

Text Editing of Articles

All of the above applies to conversion of articles, except for a few key things:

- Unless specifically told differently, we do not maintain page breaks or page number in articles. Page numbers and blank lines that indicate page breaks are removed.

- Articles are stored in the student's folder on the Scanned drive. Each student receiving alternate format of articles has a folder, and there should be a folder for the course inside the semester folder.

Creating Accessible PowerPoint Slides

When creating an accessible version of PointPoint slides for a student with a vision impairment, you will be creating a word file. This takes several steps.

1. Open the PowerPoint file
2. Save as Outline/RTF (*.rtf) (choose this format from the "Save as Type" box in the save-as dialogue box).
3. Open the .rtf file in Microsoft Word

PowerPoints require extensive editing since much of their information gets out of alignment and may include graphical elements that don't show up as text. The format for creating a Word version of PowerPoints is more complex than regular textbook and/or articles.

Title the document using Heading Level 1 with the name of the slide presentation. You can get this information from the title slide, or you can use the file name.

For each slide, the phrase "Slide X" (with the X being the slide number) should be typed, and marked as a Heading Level 2.

The actual slide title should be marked as Heading Level 3.

The slides should be one right after the other, without page breaks. You are not recreating the look of the slide, but the text and information of the slide.

All textual information on the slides should be included. You do not need to put in header and footer information (if any) from the slides.

If requested, add graphics and descriptions (see below).

Describing Graphics in Word files

Descriptions of graphics are sometimes required. If the graphic is a topic that you are familiar with or have experience in, you can describe it yourself. However, if it is out of your range of experience, please let the AFPPM know so that the professor can be tasked with writing the description.

Adding Graphics to Word files

If a student asks that graphics be added back into the document (they are removed during our conversion process), you can use the Snipping Tool. Click Start, and type in snipping, and it should come up.

The snipping tool is ready to use upon opening. You will notice your screen is greyed out, but you can click and drag to select whatever image you want to copy.

Once you have selected your image, you can then paste it into Word using Ctrl + V or edit, paste.

For a non-sighted student, you will also need to add alternate text to the image, so the student knows what the image is. To do this, right-click the image and choose "format picture."

Choose the third icon, and then "alt text."

In the "description" box, you can type up to three lines of description for the image.

Math Editing in Microsoft Word: MathType and LEAN

Basic Overview

MathType is a useful program that organizes mathematical equations into a clean visual/audible expression. We recommend using MathType for every equation, unless it is something as simple as 5 + 5 = 10 or anything of that sort. It is especially useful in creating equations such as $\sum_{1}^{\infty} x^4 + \sqrt{5}$ and $5\alpha + 2\beta = 3\sigma$ which are not easy to create using the Word Equation tools. In addition, the Word Equation Editor does not create accessible equations that can be read by a screen reader. This section will briefly highlight some most important takeaways from the **MathType Tutorial** and then give a list of the most important shortcuts in the program which should be learned to some extent.

To open up the MathType program, while in Word, press (Ctrl + Alt + Q). This will be the fastest way to access the program. For reference, you can also hit the MathType tab at the top of the Word document and then click on either Inline or Display.

The difference between the two are mentioned a couple times in the manual later on so don't worry about that right now. After this is done, the Equation box should pop up. This is where you will type all of the necessary equations in your document. You will end up creating an Equation box for each equation in your document. It should look like the following image below.

The first two rows are operations grouped into their respective category. You can click on any of those images and a box of operations will appear next to it. You can see how this is going to work as you have all of the operations you need here to create any equation. It seems pretty intuitive, but there are many tips and tricks that can be learned to help create a professional looking document.

Going Through MathType Tutorial:

This section will highlight the main takeaways from the **MathType Tutorial** from top to bottom in the order of the tutorial. Make sure this is the first thing you must look at before starting any work in MathType. Please go through the Tutorial carefully. To access the tutorial:

- Click on the MathType tab in Word
- Either click Inline or Display under the MathType tab
- After the Equation box pops up, click on the Help tab

- Click on **MathType Tutorial**

Or

Quick Shortcut: To access the Equation box even faster, press (Ctrl + Alt + Q) which opens the Inline tab. To quickly explain the difference between Inline and Display, the Inline tab will insert the equation directly where your cursor is. On the other hand, Display will automatically add 2 lines to the document and center the Equation in the line directly below the cursor. The new cursor will start at the beginning of the 2nd line down. If this is confusing, try both and you will see it is clear how they both work. No matter which way you open the Equation box, click on the Help tab and then the MathType Tutorial.

You should be brought to a Contents tab with all of the Tutorials information when opened. The first 3 things in the Contents (highlighted below) are not as important to us as it is just a brief introduction to the new MathType 6.9 program.

Getting Started

This may be the most useful part of the Tutorial so please be sure to go through this Tab carefully. After clicking on **Getting Started**, it will break into 3 subtabs. The first subtab labeled, MathType Installation, will not be useful to us unless for some reason we are having troubles with Installation issues. If this ever happens, come to this section. Otherwise, the **Basic Tutorials** and **More Tutorials** sections are what needs to be focused on.

Basic Tutorials

Opening the Basic Tutorials tab will leave you with the following subtabs, shown below.

We recommend that you go through the **Basic Tutorials** and **More Tutorials** tabs with an open Equation box side-by-side so you can practice as you read.

Most Important Takeaways from each section:

Fractions and Square Roots-

- You do not need to use the spacebar when in the same equation. MathType will automatically put a space between characters to help fluidity of typing (This will be especially useful after you learn shortcuts). MathType actually has the spacebar disabled, so if you press it you will hear a "beep" and nothing will happen. You will only use the spacebar if you change the Style, which will be explained later.
- Be sure to always know where your cursor (insertion point) is when typing. If you create a fraction or square root, you will need to click the empty box in the part of the equation you are adding your numbers. To create a fraction or square root, you can click on the associated icons at the top of the Equation box. Both are highlighted below. You can access all of the operations by finding them in this box. You will soon find out that this is a very slow way of creating equations and shortcuts will be necessary. Each operation has a keyboard shortcut (can be seen by hovering your mouse over any operation, and looking in the bottom left corner of the Equation box). Most will be listed in the **Useful/Important Shortcuts** section later on.

In the example shown below, you must click the highlighted portion (numerator) to add a number there. Let's add a 9 in the numerator and a 2 in the denominator. To add the 2, either click on the bottom portion of the fraction or simply press the down arrow to move your insertion point. Now, if you want to get your insertion point out of the fraction, but still be under the square root, press the right arrow once. There is an "A" in this position. To get out of the entire root, press the right arrow one more time. There is a "B" in this position. You can perform the same movements by simply clicking on the area you want to type with your mouse. This is totally up to you, but it may help and be faster to become comfortable with moving the insertion point with the keyboard arrows.

Play around with the insertion point by mixing up fractions, roots, and any other operations you want to by moving around the equation with your arrows. For example, create something funky

like the equation shown below and move the insertion point to where you want to edit to get an understanding of how it works.

$$\left(\frac{\sqrt{\frac{a}{b}}}{f^{g}}\right)^{\frac{5}{4}}$$

Working with Microsoft Word-

- Talks about difference between Inline equation tab and the Display equation tab as mentioned earlier.
- After you are done with editing the equation, simply click on the X icon in the top right corner of the box to save the equation. This will pop-up after the first time you do this. You may like to see this every time, but many MathType users do not. If you'd rather the equation just go directly into the document, tick the **Don't show this dialog from now on** checkbox.

Sums, Subscripts, and Superscripts-

- This section talks about how to create Sums, Subscripts, and Superscripts and the shortcuts to each one. Again, as mentioned earlier, there will be a Shortcut Section in this manual so do not worry about the keyboard shortcuts just yet. It is useful to be familiar with where each operation is in case you ever forget the shortcut so please go through each operation to familiarize yourself with where you can find it later. You will most likely use the operation box at the top to create equations for the first couple weeks or so, but you will soon become familiar with the shortcuts after performing them multiple times.
- It also highlights the insertion points again, and talks about how you can use the Tab key to move around the equation as well as the keyboard arrows. Playing around with this will help you understand how each works.

Editing Old Equations-

- You can always edit old equations and can copy specific portions of an equation to help save time if you need to write it again.
- Old documents serve as sources for new documents.
- In any equation, you can edit certain parts by highlighting the portion you are interested in.
- If you have something highlighted and then click an operation, the highlighted region will be inside the operation. For example, if we have "A", we can highlight it and then apply the fraction operation to get:

  $$A \rightarrow \frac{A}{\square}$$

  $$B \rightarrow \sqrt{B}$$

  We see that the A is automatically placed in the numerator. If we highlight "B" and apply the square root function (can either find the operation or use shortcut), than we see that it automatically puts the B under the root.

- We can also change the color of the font if needed.

  Color
  You can customize the Color menu by choosing Edit Color Menu in the MathType menu under Format > Color.

More Tutorials

Clicking on this tab will open the following subtabs:

Most Important Takeaways from each section:

Font and Styles-

- The most important part of the section is knowing the types of Styles of font. Familiarize yourself with what Styles you will apply to different parts of an equation. After reading the below text on Styles and practicing what it says, you will soon find out what the purpose of this function is. To find the '**Style menu**', look at the image below indicating which tab it is under.

Style menu

The commands on this menu assign a style to the selected part of the equation or subsequently typed characters. The current style or the style of the selection (if it is all of one style) is shown in the status bar.

Math Ctrl+Plus

The **Math** style is the default style for typing mathematics. When the current style is **Math**, MathType assigns the **Variable**, **Function**, **Number**, or **Symbol** style automatically based on what you type. IfMathType recognizes a sequence of alphabetic characters as a standard abbreviation for a mathematical function (e.g. sin for the sine trigonometric function), it will use the **Function** style. All other alphabetic characters are assigned the **Variable** style.

Text Ctrl+Shift+E

Use the **Text** style when you want to type a sentence or phrase in English (or other natural language) instead of in math. When in **Text** style, the spacebar will be enabled to allow you to enter spaces between words.

Function Ctrl+Shift+F

Use this command to create a function that was not automatically given the Function style. (See also the Functions Recognized Dialog.)

Variable Ctrl+Shift+V

Use this command to assign the **Variable** style to characters that would otherwise be given a different style. For example, **sin** is a function name that MathType will automatically assign the **Function** style. You would use this command if you actually wanted to enter three adjacent variables, "s", "i", and "n".

Greek- Symbol Ctrl+Shift+G

This command allows you to use the keyboard to type Greek letters. Once this style is active, the letters you type will be given either the L.C. Greek or U.C. Greek style, depending on whether you type a lower-case (small) or upper-case (capital) letter.

Often it is easier to enter a single Greek letter by using the Ctrl+G One-shot Keyboard Shortcut or by using the Greek symbol palette. This avoids having to switch into Greek style and back again, because the one-shot only affects the very next keystroke.

Vector- Matrix Ctrl+Shift+B

Mathematical vectors and matrices are sometimes given a bold character style. Use this command to assign the Vector- Matrix style to selected text or subsequently typed characters.

Often it is easier to enter a matrix or vector by using the Ctrl+B One-shot Keyboard Shortcut . This avoids having to switch into Vector-Matrix style and back again.

User 1 Ctrl+Shift+U
User 2 Ctrl+Alt+Shift+U

The User 1 and User 2 styles may be used any way you like. Use the Define Styles Dialog to assign a font and character style to each. These styles are used most often to enter characters from alternate alphabets, such as Blackboard Bold (double-stroked) or Fraktur (Old German) .

Other...

This command brings up the Other Style dialog, allowing you to assign a specific font and character style to selected text or subsequently typed characters.

Define...

This command brings up the Define Styles dialog, allowing you to change the font and character style assigned to each style for the entire equation or for new equations. You can also invoke this command by double-clicking on the Style area of the status bar.

Including Text in an Equation-

- Talks about the ‘Text” Style option in particular and gives an example on when to use it. This is a very important Style, so make sure you read this thoroughly. MathType automatically recognizes certain phrases and may distort the Style without you wanting to.

Using MathType’s Toolbar-

- You can edit the Equation box operations if you find that some are appearing more than others. You will need to press the Alt key and the symbol at the same time and drag it into the Toolbar which is highlighted below. This is only going to be needed if you are repeatedly pressing the same operation every time. We recommend learning the shortcut on reoccurring operations as this is the fastest way to access the operations.

The rest of the More Tutorials section should be read over, but does not have a lot of super important stuff to cover. They will answer specific questions you have depending on what material you are working on. If you ever need to find something in the Tutorial but don’t know where to look, click on the **Search** tab near the **Contents** tab and type in what you are looking for. Example shown below.

Using MathType

- The Equation box operations can all be edited to your specific preferences. If there's anything you want to customize to make it easier for you, it can probably be done. Just remember that the lab computers are shared, so you may want to make sure that your additions do not transfer over to the next user's profile. If so, you must change the preferences back to default. We recommend just learning the default settings that way every student is on the same page.
- The most important subtab from this section is the **Styles** tab under **Using Fonts**. There is a screenshot of this in the earlier pages of this manual. Be sure you know the distinctions between these fonts.

The rest of the tutorial should be looked over, but does not contain information that requires to be repeated. That being said, do not skip over it. It may answer last questions you may have up to this point. Now you will see the list of Shortcuts that we have found useful in the lab. Depending on what you are working on, some operations will come up more than others. Just be sure to remember shortcuts of the relevant material you are working on.

Useful/Important Shortcuts

Here are a list of important shortcuts that are commonly used (Symbol | Operation | Shortcut). Below are screenshots with a highlighted box that designates where the operations can be found.

Relational symbols

≤	Less than or equal to	(Ctrl + K, ,) This means press Ctrl and K at the same time, and then press , after. The , after the K means "then". And intuitively, + means at the same time.
≥	Greater than or equal to	(Ctrl + K, .) This means press Ctrl and K at the same time, and then press . after.
≠	Not equal to	(Ctrl + K, +) For the + at the end, you need to press (Shift + =).

Embellishments

$\bar{x}$	Over-bar	Highlight the number “x”, and then press (Ctrl + _). To do _, press (Shift + -)
$\tilde{y}$	tilde	Highlight the number “y”, and then press (Ctrl + `). ` is the symbol to the left of the 1 on the keyboard, not the quotation key.

Operator symbols

$\cdot$	Dot operator	(Ctrl + Shift + K, .) Press Ctrl, Shift, K at the same time, and then press .
$\times$	Multiplication	(Ctrl + K, T)

Arrow Symbols

$\rightarrow$	(Ctrl + K, Right)
$\leftrightarrow$	(Ctrl + K, Alt + Left)

Logical Symbols

$\forall$	For all	(Ctrl + Shift + K, A)
$\exists$	For every	(Ctrl + Shift + K, B)

Set Theory Symbols

∈	Is an element of	(Ctrl + K, E)
∉	Is not an element of	(Ctrl + K, Shift + E)
∪	Union	(Ctrl + K, U)
∩	Intersection	(Ctrl + K, X)
⊂	Subset of	(Ctrl + K, C)
⊄	Not a subset of	(Ctrl + K, Shift + C)

Miscellaneous symbols

ℝ	Real numbers	(Ctrl + D, Shift + R)
ℤ	Integers	(Ctrl + D, Shift + Z)
ℂ	Complex numbers	(Ctrl + D, Shift + C)
ℚ	Rational numbers	(Ctrl + D, Shift + Q)
ℕ	Natural numbers	(Ctrl + D, Shift + N)
∞	Infinity	(Ctrl + K, I)
°	degree	(Ctrl + Shift + K, D)

Lower Case Greek Letters

α	Alpha	(Ctrl + G, A)

β	Beta	(Ctrl + G, B)
δ	Delta	(Ctrl + G, D)
ε	Epsilon	(Ctrl + G, E)
ϕ	Phi	(Ctrl + G, F)
γ	Gamma	(Ctrl + G, G)
μ	Mu	(Ctrl + G, M)
π	Pi	(Ctrl + G, P)
θ	Theta	(Ctrl + G, Q)
σ	Sigma	(Ctrl + G, S)
τ	Tau	(Ctrl + G, T)

Uppercase Greek Letters

Δ	Delta	(Ctrl + G, Shift + D)
Γ	Gamma	(Ctrl + G, Shift + G)
Φ	Phi	(Ctrl + G, Shift + F)
Σ	Sigma	(Ctrl + G, Shift + S)
Ω	Omega	(Ctrl + G, Shift + W)

Fence Templates

(a)	Parentheses, or round brackets	(Ctrl + 9)
$[b]$	Brackets, or square brackets	(Ctrl + [ )
$\{c\}$	Braces, or curly brackets	(Ctrl + {)

Fractions and Radicals

$\frac{a}{b}$	Fraction	(Ctrl + 9)
$\sqrt{c}$	Square root	(Ctrl + R)
$\sqrt[n]{y}$	nth root	(Ctrl + T, N)

Subscript and Superscript templates

a^b	Superscript	(Ctrl + H)
x_y	Subscript	(Ctrl + L)
t_v^u	Superscript and Subscript	(Ctrl + J)

Summation Templates

$\sum x$	Summation with no limits	(Ctrl + T, Shift + S)
$\sum_a^b y$	Summation with limits	(Ctrl + T, S)

Integral Templates

$\int x$	Integral with no limits	(Ctrl + Shift + I, !)
$\int_a^b y$	Integral with limits	(Ctrl + I)

Underbar and Overbar Templates

a	Tilde	(Ctrl + ^, ~)
$\hat{b}$	Hat	(Ctrl + ^, 6)
$\bar{c}$	Over-bar	(Ctrl + ^, -)

Matrix Templates

$\begin{matrix} a & b \\ c & d \end{matrix}$	2 row, 2 column matrix	(Ctrl + M, 2)
$\begin{matrix} a & b & c \\ d & e & f \\ g & h & i \end{matrix}$	3 row, 3 column matrix	(Ctrl + M, 3)

Also notice the tabs below the main operations. They contain a lot more operations that are less common.

Practice

Here are just a few commonly seen equations. Open up a new document and a new Equation box so you can try and re-create the following equations. If you need help or can't figure it out, click on the equations in this text to see how it was created:

1. $\cos\left(\frac{2\pi}{40}\right)\cdot 40^3$

2. $\sum_{1}^{100} 2x^2 + \sqrt[5]{9} = y$

3. $\begin{pmatrix} 2 & 4 & 5 \\ 1 & 4 & 6 \\ 7 & 9 & 0 \end{pmatrix} \times \begin{pmatrix} a & b & c \\ d & e & f \end{pmatrix} =$

4. $e^{-\frac{t}{2}} y = \int 2e^{-\frac{t}{2}} \sin(3t)\,dt + c$

   $e^{-\frac{t}{2}} y = -\frac{24}{37} e^{-\frac{t}{2}} \cos(3t) - \frac{4}{37} e^{-\frac{t}{2}} \sin(3t) + c$

   $y(t) = -\frac{24}{37}\cos(3t) - \frac{4}{37}\sin(3t) + ce^{\frac{t}{2}}$

5. $\left[\sigma^2(2\mu+\varepsilon)+\delta\right]_i$

MathType -LEAN

Occasionally, converting the math using MathType in a Word document is not the last step in the process. Some screen readers need to have the equations converted to an object that can be read. This last step is called LEAN, and is a simple overlay that gets applied to files once the MathType is completed. This step SHOULD NOT be taken if you have not been instructed specifically to do so.

How to convert to LEAN

1. After all equations are in MathType you can run Lean over the document.
2. With the document open, select all of the text. [ctrl+A]
3. Find the LEAN In Shortcut key on your desktop

4. Double click this button and it should process all the equations.
5. When you are finished make sure to SAVE AS and add "_Lean" to the name of the file. You MUST do this, for the Lean application work properly. The LEANed files can be moved into a new Folder in the WORD folder, labeled as LEAN.

Example Textbooks

There are textbooks on the file server that are good examples of work that has been done using MathType and Lean. They are:

- Neural Networks - Rojas –
- Statistical Reasoning for the Behavioral Sciences

Turning Word Files Into Braille

A well-formatted word file can be turned into Braille directly using Duxbury software. Two types of output can be created: physical Braille printouts, and BRF (Braille Ready Files). BRF files are electronic and can be read using special software or hardware on a student's computer.

How to operate Duxbury to convert a file to Braille

1. Locate Duxbury software on the desktop and open it. In some cases, instead of "Duxbury," you will find "DBT."
2. Choose File, Open to locate the file you wish to convert. Duxbury will open the following file types:
    a. Word (docx)
    b. Word (doc)
    c. .txt with formatting

    Any other file types will need to be converted to one of these formats before being opened in Duxbury.

    After you have chosen your file, a dialog box will ask you to choose what template to open the document with. Choose the English (UEB) – Bana template. Then choose okay.

3. Once the file is loaded, choose file, translate. The file will be translated to Braille and appear in the Duxbury window.

To print the Braille you've just created:

1. Choose file, emboss.
2. Accept the default settings.
3. Click OK.

The Braille will print on the embosser in the Braille closet. Once the Braille has finished printing, use these steps to remove your printing job from the embosser:

1. Press the OL button to take the printer offline.
2. Press the FF button to roll the paper forward until you can separate it at the perforation.
3. Press 2, then E, and the paper will roll back to its start position and the embosser will be back online.

To save the Braille you've just created:

1. Choose File, Save As.
2. Browse to your save location (if necessary), and type in a file name.
3. In the Save as Type drop-down, choose "formatted Braille, USA encoding (BRF)."
4. Click Save.

Tactiles – Adobe Illustrator

This manual will explain how tactiles are made using Adobe Illustrator. It will go through all the helpful tools, and provide you with the knowledge to make your own tactile. While many of the tools in Illustrator are explained below, not all of the tools available will be shown in this document. Hopefully this manual will help you get started and you can discover more tools in Adobe Illustrator that will make the process easier.

Finished tactiles should be clear, consistent, and well-made. The goal of tactiles is to convey the same information in an accessible way. It is therefore necessary to always have the student in mind when creating a tactile. The finished project should be free of errors and typos and should represent your best attempt to recreate the information contained in the given graphic. Additionally, students may have specific preferences for the layout, etc. of their tactiles. It is your duty to honor these requests.

Basic Setup

Paper size is 11 x 11.5

The margin size on the left will change depending on whether you use paper with or without binding holes.

With holes = 3/4 inch margin

- If you want to bind multiple sheets together (for example if they all belong to one chapter, or powerpoint presentation)

Without holes = 1/2 inch margin

- If it's a single sheet.

Opening a New Tactile

If this is a new project, the best place to start is under AAA Manuals → Illustrator → Template. Be sure to save-as immediately after opening into the desired location/folder so you don't save over the template.

If the new tactile is a continuation of a project, start with a previous tactile from the project and save-as, again to avoid saving over the original. Using old tactiles from the same project allows you to copy the formatting and ensures consistency.

Text

Most graphics have a text component. For simplicity's sake, it is easier to copy a new, formatted text box from the template. Font size and spacing, as well as text orientation, are all very important to ensure that the text is readable. Readability is imperative.

Basics

Braille is not unlike standard text, but there are a few important differences:

First, as the tactiles do not appear alongside the text, adding a title to the slide is important. A clear title should be included on every page, regardless of whether the page represents a continuation of the previous tactile or a new graphic, every page must be labelled. If the format is for a specific student, their name should appear first. This should be followed by the class code for class materials and/or a book title

and chapter for textbooks. Then, the title should include the problem or page number and lastly the graphic title, if one exists.

Example:

Student Name

CLAS 1000 Slide 23 / Intro to Class page #23

Figure 1.1 Class Diagram

All important information in a graphic should be included in a tactile. However, this may be less than the amount of text in the original. We are not content experts, so do not try to make judgements about what is and is not important without talking with the Alternate Format Production lead, the instructor, or the student. The instructor for the class or information from the student should allow you to determine if any text does not need to be included, otherwise all information should be included.

Some Braille symbols can signify either a number or a letter. Precede numbers with the pound symbol (#) and stand-alone letters with a semi-colon (;). This is extremely important when depicting a mixed sequence of numbers and letters. For example, 1b2acd3 should read #1;b#2;acd#3. Otherwise, the student could read 1221343 or abbacdc. When labeling graphs and other graphics, if all the labels are numbers or stand-alone letters, use your best judgement to determine whether extra-notation is necessary to accurately convey information.

Capital letters are also different in Braille. In most cases, noting capital letters is unnecessary. However, if noting a capital letter is important to understand the information of the graphic, it can be denoted by preceding capital letters with a comma. Example: ,Doctor or p,H.

Font

Make sure to use the font style Braille29 ASCII in size 15.14. You will see a preview of standard letters in the text box, but these will be printed in Braille when the graphics are embossed.

Unlike standard fonts, Braille cannot change size or it becomes unreadable for the student. No matter how small or how big the text on the original graphic, all text will be the same size on the tactile. This may pose problems when attempting to fit everything on the page, which will be discussed below.

The font itself should always be black. Do not change color or opacity as this could interfere with the student's ability to read the text. Certain text elements are impossible to effectively recreate in Braille. This includes font styles such as bold and italics, strikethrough and color. Below are tips to convey this information without compromising the text, but it is not an exhaustive list of the problems you may encounter. If you feel the text may not be readable, do your best to explain in a key or note how the text is formatted for a sighted viewer or, if possible, to explain what the text is attempting to differentiate.

Color, strikethrough, bold, etc.:

When creating a tactile, all text should be black and free of any lines or distractions. If the text in the graphic is not standard text, the best way to differentiate it from other text is to add a note in parenthesis to alert the reader of its intended format. This may take up a considerable amount of space, but it is important to convey all important information to the student.

Underline:

In most cases, treat this like you would any of the above scenarios. Use your discretion as to what treatment will most effectively convey the information in the graphic to the student.

Spacing

While the preview allows you to see standard letters, Braille letters require more space when printed. It is important to ensure that the text will not overlap any other elements of the graphic as it will be unreadable to the student. Err on the side of caution when worried about the sizing of text. You may notice a blue bar extending past the last letter in the text box; this signifies the extra space needed for the Braille letter. It is helpful to remember that the text is aligned along the top and left sides, so extra room will always be required to the right and below of the text.

If text is cropped by the text box itself, a red plus will appear on the bottom right corner. This is a signal to expand the text box.

With this in mind, it is important to separate text boxes from other graphic elements when resizing figures, as the text may become corrupted and fail to print in Braille. If not apparent when working on the document, this will be evident when the tactile is printed as it will not appear in Braille but as standard letters embossed on the graphic. The only solution is to delete the effected text boxes and retype the information in a new box.

The example below demonstrates what to avoid.

If you notice an overlap or ambiguity after the document has printed, it is your job to fix the problem and reprint the document. Unless you can read Braille, you will have no way of knowing if the readability of the text was affected. Printing multiple times may be acceptable as you first start out, but you should eventually be able to correctly space the text and graphics on the first attempt for most tactiles.

Orientation

All text should be horizontal and read left-to-right. If a graphic shows vertical text, this should still be displayed horizontally on the tactile. If (and only if) the orientation of the text is important to the meaning of the text you should note the orientation in parenthesis after the text.

Every effort should be made to produce a clean product. If there are multiple text boxes, ensure that they are distinct. Horizontally aligned labels may appear to the student to be a continuation of the same. Make sure there is ample distance between horizontally-aligned text boxes so they appear distinct. Conversely, it can be beneficial to align text boxes vertically where possible, such as a graph, so the student does not have to search around the page for the information. While alignment does not need to be perfect, there should be a conscious effort to create a clean product.

In the first tactile, there is ample spacing between elements to help the student differentiate between parts of the graphic/different graphics.

In the second tactile, all the elements are jammed together, making it difficult to differentiate between graphics. Additionally, the text is not aligned and often overlaps other text, creating a tactile that would be unreadable and therefore useless to the student.

Keys

The amount of text in a graphic may not always fit on a tactile. The amount of text may also make for a tactile that is too complicated. In these instances, the best solution is often to create a key. If possible, this key can be on the same page as the graphic, but in most cases will need to be on a separate page. In the latter case, a note should be made on the first page stating, “Key on next page”. The page containing the key should be clearly labeled and should immediately follow the tactile.

Using numbers or letters is at your discretion, but try to use whichever will least interfere with or resemble the information presented in the graphic. If it is a graph with many numbers, use letters for the key or if it is uses stand-alone letters elsewhere in the graphic, use numbers to avoid confusion. In the example below, creating a key increased readability by separating different number values to improve clarity.

As always, precede numbers with a pound symbol and letters with a semicolon.

Below is an example tactile. There is an abundance of numbers within the graphic, in addition to numbers denoting “region”. Adding a key improves clarity by removing numbers associated with regions and replacing it with a key using letters. However, when using a key it is important to state both that it is present and where it is. The title text in this tactile could have included “”key on bottom of page”, or, had the key been on the following page, “key on next page.”

Survey of Mathematics Chapter 02

Page #67 figure #2.17

Key:

; a = Region # 1		; e = Region # 5	
; b = Region # 2		; f = Region # 6	
; c = Region # 3		; g = Region # 7	
; d = Region # 4		; h = Region # 8	

Helpful Hints

When using the pen or line tool, **hold shift** to draw orthogonal lines (completely/perfectly vertical, horizontal, or diagonal).

To scale up an object or multiple objects at once, **hold shift** to resize it proportionally.

https://www.lynda.com/Illustrator-tutorials/Scaling-objects/370378/412084-4.html

Don't be afraid to use more than one page. If the image is really complex, it can be broken into simpler parts spanning multiple pages.

If any of your toolbars disappear for some reason, you can get them by going to Window. Click on "Control" or "Tools." Alternatively, the "tab" button will make all your tools appear/disappear.

Graphics

An easy way to copy an object is to select the object, hit Alt, and drag the item to a new spot. (a white arrow should appear next to the black one).

To rotate an object, select the object, hover the mouse over the outside of the bounding box until a two-sided arrow appears, click and drag in the direction you want it to turn.

https://www.lynda.com/Illustrator-tutorials/Rotating-objects/370378/412085-4.html

Holding shift during this process will turn the object at 45 or 90 degree increments.

Lynda.com is a very helpful resource for a lot of the tools used in Illustrator. For the homepage of the Illustrator CC Essential Tutorials follow this link:

https://www.lynda.com/Illustrator-tutorials/Illustrator-CC-Essential-Training-2015/370378-2.html

*Under relevant tools below, you will also find links to specific tutorials.

Textures and Fill Colors

Tactiles can't display color but they can differentiate TEXTURES!!

Fill textures

Use 60-70% black instead of 100% black for filling in bigger spaces (So that it doesn't rip through the page)

30-40% black for a light texture (Can't go below that because it won't show up)

Dotted and/or striped textures can also be used to differentiate items in a graphic (see below)

Examples in Annotated Template Illustrator file

Stroke width

100% black

40% black

- Keep in mind that while the texture may look different on the display screen, the actual printed texture may feel exactly like another one. It’s all a matter of trial and error, so stick to the basic level of black, and if needed check out the different textures.
- Look at Campus Map tactiles for the different textures used to display grass, road, sidewalk, and building

Toolbars

Control Window (normally at the top of Illustrator)

Color/Grayscale

The first box is the fill-in color. The second box is the outline color.

Click the down arrow to find more color options.

The red horizontal dash dignifies empty or no-color. Empty outlines will not appear when printed, and empty fill will create a hollow shape. The latter can be extremely useful when using multiple layers.

When I talk about the percentages of blacks, I'm referring to the circled area above. If you hover over the boxes you can see the color description, i.e. k=40 means 40 % black.

https://www.lynda.com/Illustrator-tutorials/Adding-color-fills-your-objects/370378/412090-4.html

Texture/Pattern

To access the basic patterns and textures to use as fill colors you select the drop down menu of the fill color box at the top of the workspace → the stacked books icon/Swatch Libraries drop-down → patterns → basic graphics → and dots, lines, or textures.

No Selection
Stroke:
5 pt Round
Opacity:
Preview)
Save Swatches...
Art History
Celebration
Color Books
Color Properties
Corporate
Default Swatches
Earthtone
Foods
Gradients
Kids Stuff
Metal
Nature
Neutral
Patterns
Scientific
Skintones
System (Macintosh)
System (Windows)
Textiles
VisiBone2
Web
User Defined
Other Library...
Basic Graphics
Decorative
Nature
Basic Graphics_Dots
Basic Graphics_Lines
Basic Graphics_Textures

Basic Graphics_Dots
Basic Graphics_Lines
Basic Graphics_Textures
Find:

Stroke

Stroke:
1 pt

The stroke is the line width. 1pt is standard. You can use 2pt for a thicker line. Anything bigger will rip the page. Lower than 1pt can be used for lines that are less emphasized (This has a similar effect to changing the percentage of black or changing the opacity).

https://www.lynda.com/Illustrator-tutorials/Adding-strokes-your-objects/370378/412092-4.html

Tool Window (normally on the left side of Illustrator)

The arrow at the top will change the display of tools to one column (circled above).

Panel Window (normally on the right side of Illustrator)

Tools that are frequently used to make tactiles are described below.

Layers

Layers serve as a way to organize and separate different hierarchies of your page. It is best used to distinguish between text, images, and figures. With layers, you are able to lock certain things while editing others. It is especially useful when tracing figures and images. You can place the original image on one layer and lock it, then trace over it on another layer to ensure proper proportions. Once finished you can turn off the original image layer and are left with what you've traced.

The layers panels is located on the right side of your illustrator workspace. This is where you can manage your layers settings by adding/deleting them (with the page and trash icon at the bottom right of the layers panel), changing their order, locking/unlocking them, and hiding/revealing them.

The eye is used to hide and unhide an image. This is useful if you don't want to delete anything. For example, you could put all the original images in one layer, and then hide it before you print. Note that if you delete layer, all the objects within that layer will be deleted.

Each layer is color coded. You will also notice that the layers are stacked and would need to be moved around if you wanted the order to switch. If you want to select all the objects in one layer click the circle on the right hand side.

https://www.lynda.com/Illustrator-tutorials/Hiding-locking-deleting-layers/370378/412068-4.html

Artboard Tool

This tool can be found on the left-hand-side toolbar and is useful for moving around artboards. If you want to have multiple artboards in your document, you will eventually need to move the artboards around. You can also resize artboards from this tool.

On the layers panel on the right-hand side, you can find the Artboards panel. Think of artboards like pages. From this window you can add, delete, and rename artboards.

Arrange Tool

Within a layer you can also arrange the objects. To do so right click on the object the go to arrange and you will be able to move around the objects. This will allow certain things to appear in the front or back.

Align tool

The align tool allows you to align or distribute objects equally and/or evenly.

Clicking on the dropdown menu gives you more options

Here you can also distribute space between objects evenly. You can also set the tool to align objects to the selection or artboard.

Selection Tool

The selection tool can be used to resize and/or drag an object from one place to another.

The direct selection tool can be used to move “anchor points” which changes how the object will look. Once an anchor point is selected, you can move it using your mouse or the arrow keys on your keyboard. To move multiple anchor-points at once, hold shift and select all the desired anchor points.

https://www.lynda.com/Illustrator-tutorials/Using-Direct-Selection-tool/370378/412080-4.html

Example

The Selection tool was used to move the copied square to the right, the direct selection tool was used to move the lower right side of the square on the right up and over.

Grouping

Some complex figures and shapes require the use of multiple shapes. By holding shift, selecting all of the objects you would like to link together, and then making a right-click, you can select “group” to link the objects so they move as one. To unlink the objects, simply right-click and select ungroup.

This can be helpful for shapes like arrows, which are notoriously difficult and appear often in graphics. The best way to create an arrow is to use the pen tool to create a triangle and finish with a connecting line. Then, as mentioned above, group the objects together to create a single arrow.

Pen Tool

The pen tool is used to make anchor points and is useful for outlining complex images.

When the pen tool is selected, clicking once will drop an anchor point. Every time you click, you will add an anchor point and connect the points with a line. When tracing an object, the level of detail can be influenced by the number of anchor points; more anchor points create a more detailed image.

To close a series of lines, a small circle will appear near the tool. Click on the first anchor point in the series and the shape will close.

A closed path is useful if want to fill in the shape. If when tracing an object color appears over the object you are trying to trace, change the fill color of the pen tool to empty, and start again. After the shape is finished, you may go back and add or change the fill color and stroke weight and color.

https://www.lynda.com/Illustrator-tutorials/Pen-tool-basics/370378/412117-4.html

https://www.lynda.com/Illustrator-tutorials/Drawing-curves-Pen-tool/370378/412118-4.html

https://www.lynda.com/Illustrator-tutorials/Drawing-complete-shapes-Pen-tool/370378/412119-4.html

Curved lines

Using the pen tool, you can create a curved line by dragging the mouse before you release the second anchor point, where the angle of the curve will change based on how/where you drag the final anchor point. There will be leading lines from the given anchor points. Pulling the leading lines farther from the anchor point or moving the control points toward or away from the anchor point will manipulate the degree of the curve.

This is a useful tool when tracing organic shapes.

Anchor Points

If you draw a shape, but then need to change a part of the shape, use the "Add anchor points" tool. With this selected, when you click on a line, new points will be added.

Pen tool

Add anchor points

Delete anchor points

If you want to add anchor points evenly, go to Object → Path → Add Anchor Points

Line tool

Similar to the pen tool, the Line segment tool is useful for straight lines.

When the line tool is selected, clicking once will give you a pop up option which will allow you to set the length and angle of the line:

If you want to draw your own line, click and drag where you want the line to go.

If you want to draw your own line, click and drag where you want the line to go. To ensure orthogonal lines—lines that are straight or at 45 degree angles—hold shift while drawing the line.

The arc tool is used for curved lines. With the Arc tool you can adjust the arc size with the Direct Selection Tool.

Example:

Line tool

Arc tool (anchor point to change arc)

Dashed Line tool/Arrows

The dotted line tool is important in distinguishing between different sorts of labeling. To access this tool panel, select the drop down menu under the stroke panel (circled below) on the panel window on the right-hand side. Here you are able to control the width of the dashes and the end points.

Draw a standard line and while it is selected check the box called dashed line (circled below) – from here you may control the rest of the settings.

This is also where you are able to create different sorts of arrows. Having selected a line, choose your desired arrowhead and orientation in the Arrowheads drop-downs. Once selected you can then choose the scale at which you want the arrowheads right below.

https://www.lynda.com/Illustrator-tutorials/Adding-endpoints-dashed-lines-your-strokes/370378/412093-4.html

Shape tools

Rectangle (hold shift for perfect square) Rounded rectangle Ellipse tool (Hold shift for perfect circle)

Any time you want to type in specific dimensions for the shape, click once on the artboard to get the following menu.

The Polygon Tool gives you the option to set however many sides you want.

Transform Command – Rotate and Reflect

The transform command is useful when needing to consistently manipulate the orientation of a figure. To transform a figure, select it → right click → transform → select desired transformation. The options are **move**, **rotate**, **reflect**, **scale**, and **shear**. The most commonly used are rotate and reflect in order to create parallel/mirrored tactiles.

Scissors tool

The scissors tool allows you to separate and segment single lines into multiple parts. It can be found underneath the eraser pull out menu.

Knife tool

The knife tool allows you to separate and segment shapes into multiple parts. It can be found underneath the eraser pull out menu.

Clipping Mask

Clipping masks serve as a way to crop an image. It overlays one shape with another then reveals only what was overlapping.

To use this tool, select the two objects you wish to mask and right click.

Select *'Make Clipping Mask'*

Eraser Tool

The easiest way to erase something is to select the object and hit delete or backspace.

The eraser tool is also useful if you want to delete certain segments of an line. However, for closed objects, this may not produce the desired results. An alternative to the eraser tool is to use white, non-outlined shapes to cover unwanted areas. Anything covered by a white-filled shape will not appear on the printed document. Otherwise, use the clipping-mask tool.

Example:

Before (one continuous line)

After (5 divided lines)

https://www.lynda.com/Illustrator-tutorials/Using-Eraser-tool/370378/412114-4.html

Eyedropper Tool

If you want to match the same format (i.e.: color, texture, line width) of an object OR text, use the eyedropper tool. First highlight the object/text you want to change. Then click on the eyedropper tool and select the object/text you want to match.

Organizational Tabs

For most tools in the organizational tab, the shortcut keys will be more efficient. You can find the shortcut keys on the right hand side of the drop down.

File

Make sure you consistently "Save" after you "Save as". Sometimes your computer can crash and you don't want to lose all the work you have done. The print feature is also available in this tab. See "Printing" for more details.

Place

If you want to bring an object/image into the Illustrator file without using the snipping tool or copy/paste, you can use 'Place'. The 'Place' tool is ideal for an image that is already its own file (i.e. a jpg). If you are taking a graphic from a book chapter or part of a PDF, copy/paste will be easier.

To use the place tool, first create a new blank layer. Then, go to the File menu at the top left, and select 'Place'. The image will appear on the open layer. It may be helpful to move this layer to the bottom of the layers tab so that you are able to trace over it. Then, when you are finished, you may delete the layer or hide it from sight.Edit

Most of the tools in the Edit tab are basic and will probably be the most used. Make sure you remember the hot keys for undo (Ctrl + Z), redo (Shift + Ctrl + Z), cut (Ctrl +X), copy (Ctrl + C), paste (Ctrl + V), and save (Ctrl + S).

You can also Check Spelling (Ctrl + I).

View

Zoom tool

The zoom in and zoom out features are great for navigating through artboards and to view images in detail. This will help trace a more accurate outline.

Rulers tool

If you want to see/hide the rulers at the top and left side of the page, use the shortcut (Ctrl +r) or you can find the tool under the view tab.

Guide tool

Under the view tab, you can access the guide tools. You can hide and show guides. If you “lock” a guide it will prevent the guides from moving or being deleted. The guides are used to make the margins in your document. Remember that the margins are important for making sure all your work actually shows up on you final printed tactile. The guide itself will not print along with the other objects on your artboard.

Window

The ‘control window’ and the ‘tool window’ are found here and can be removed or turned on from here.

Other useful tools to have available for tactiling would be the align tool, color tool, stroke tool, and artboard/layer tool.

Printing

Printer name: ViewPlus Premier 100

The media size should be 11.5 inches by 11 inches. Check to make sure the page size is correct as it may not default to this size. If not click Setup → Preferences → Advanced. Then you should get something that looks like this:

Printing Etiquette

First, announce that you will be printing to avoid confusion. Submitting multiple print-jobs simultaneously may overload the embosser.

Before submitting the print job, make sure you use the down arrow button on the tactile machine to bring the paper back to the original position. This may require hitting the down arrow twice if the paper has not returned to the original position after one time. Alternatively, the machine may beep signaling that is already in the correct position.

Always check to see if the printer is set back. This avoids wasting paper but is also easier than cancelling, readjusting the paper on the tactiler, and reprinting.

Close the closet door before you start as it can be pretty loud.

Lastly, after printing, you may need to use the up arrow button to release enough paper to remove your printed tactile. Be sure to reset the paper using the down arrow button. This helps to ensure that we don’t waste paper if the next person to print forgets to check the paper before printing.

Appendix A – Alternate Format Request Forms

Alternate Format Request

Student Name:_____Date of Request: _____

Preferred File Type:_____

ISBN/Title	Author	Edition	Year	Publisher

Requested from:_____Date:_____

Received format:_____Date:_____

Worked on by:_____Date Started:_____Date Ended:_____Time spent:_____

Delivered to student via:_____ Format Given:_____Date:_____

Notes:

If picked up by student:
Signature:_____Date:_____

Student: Semester:

Course:

Articles:

Date Received	**Name**	**Date completed**	**Sent**

Appendix B – Login and Password Information

Access Text Network

Login: ds-atlab@colorado.edu
Password: disAbility14

Bookshare

Ask for a provisioned account for Bookshare before using. There is no general purpose login for Bookshare.

DS-ATLAB@Colorado.edu email account

Login: ds-atlab@colorado.edu
Password: disAbility14!

Large File Transfer Service

Use same credentials (above) as for email account login.

Appendix C

Sample wording for email to send to publishers requesting alternate format. FERPA guidelines and Federal law prohibit us from disclosing the name of the student or the nature of their disability, and we also must be careful about disclosing personal information inadvertently when a publisher asks us for proof of purchase. All requests should include your name, title, mailing address on campus, and campus phone number.

The wording for an email or contact form is:

Subject: In need of alternate format for a student with a print disability

Body:

We are in need of the following text in alternate format for a student with a print disability. The student has purchased a copy of the text and has a documented disability that requires the provision of alternate format. The book is:

Spectacular Geography
Miller
9780825378915

Any file format will do, as we can convert to what the student needs. Thanks in advance for your assistance.