Introduction to Western Languages Typography

The Six Modules

Module 1  Typography overview
Module 2  Type vocabulary
Module 3  Letters
Module 4  Words
Module 5  Sentences
Module 6  Paragraphs
Appendix
Course Description
An introduction to typography and type design for print covering an overview of the history of Western typography; standard terms used to identify elements; best presentation of letters, words, sentences, and paragraphs for legibility. The six learning modules are designed to be one-hour sessions but time may vary depending on the number of students and discussions. Obviously, six hours of learning does not substitute for years of practical experience and learning but it can be a start.

Course Goals and Student Learning Objectives
This course will give the student a basic understanding of typography:
- Western historical context
- Terms
- Use of type for legibility
- Use of type to communicate messages

Course Content Learning Outcomes
Upon successful completion of this course, students will be able to:
- LO1 Identify industry standard and successful use of typography
- LO2 Understand and discuss how letter, words, sentences, and paragraphs combine to inform readers
- LO3 Learn and use relevant vocabulary for the industry

Required Texts/Readings
Textbook
There is no required text book. Numerous books are available free on loan from libraries and professional resources are available online.

Other Readings
The instructor’s appendix section has suggestions for more information. Meet with type designers and graphic designers to explore the topic further.

Other Equipment / Material Requirements (Optional)
Enhanced learning can be realized with Internet access and by using a computer with publishing software like InDesign 2.0 or later versions.
Assignments and Grading Policy

Class instruction will include a lecture, discussion, and homework review. Lectures will be given based on the module information, discussion will be through student class participation, and homework will include answering the quizzes and bringing in print samples of newspapers.

Assignments will be given in each class and may be just a quiz or a quiz and other work. Assignments will be due the following class session.

Each class, except the first one, will cover learning objectives 1, 2 and 3.

Grading will based on earning a total of 100 points by the end of the six classes.

<table>
<thead>
<tr>
<th>POINTS</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>100–98</td>
<td>A+</td>
</tr>
<tr>
<td>97–94</td>
<td>A</td>
</tr>
<tr>
<td>93–90</td>
<td>A-</td>
</tr>
<tr>
<td>89–87</td>
<td>B+</td>
</tr>
<tr>
<td>86–83</td>
<td>B</td>
</tr>
<tr>
<td>82–80</td>
<td>B-</td>
</tr>
<tr>
<td>79–77</td>
<td>C+</td>
</tr>
<tr>
<td>76–73</td>
<td>C</td>
</tr>
<tr>
<td>72–70</td>
<td>C-</td>
</tr>
<tr>
<td>69–67</td>
<td>D+</td>
</tr>
<tr>
<td>66–63</td>
<td>D</td>
</tr>
<tr>
<td>62–60</td>
<td>D-</td>
</tr>
<tr>
<td>59–0</td>
<td>F</td>
</tr>
</tbody>
</table>

Any late work will receive a maximum of half credit. There is no extra credit. Participation in class involves discussion, critical thinking, use of relevant vocabulary, and questions about the material covered. An F grade is a fail.

Introduction to Typography Course Schedule

<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Topics, Readings, Assignments, Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Typography overview</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Type vocabulary</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Letters</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Words</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Sentences</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Paragraphs</td>
</tr>
</tbody>
</table>

The schedule is subject to change with fair notice by e-mail and in the previous class.
Typography

The art of making thought visible

"Typography is to writing as soundtracks are to movies."

Jonathan Hoefler
Type designer
Module 1
Typography Overview

Type facilitates

- Giving language a physical body/form,
- Amplifying and aesthetically shaping content appropriate for each communication,
- Enabling social flow of information.
Type legibility

- Type needs to be readable.
- Some fonts work better than others.
- Size, spacing, and amount of type are a function of legibility as are different reader constraints.

Design/Type eras

- **Pre-Gutenberg** (<1455)
- **Gutenberg** (1456–1760)
- **Industrial** (1761–1890)
- **Artistic** (1891–1983)
- **Digital** (1984–present)
Design/Type eras

- Pre-Gutenberg (<1455)
  - Hand produced

- Gutenberg (1455–1760)
  - Blossoming of printing
  - Increased literacy (more to read)
  - Roman fonts replace Blackletter
Design/Type eras

- **Industrial** (1761–1890)
  - Mechanics controlled design,
  - Efficiency over aesthetics,
  - Disproportionate ads emphasis,
  - Typeface effects, not integrated

- **Artistic** (1891–1983)
  - Type design improved, respected,
  - Words and images combined well,
  - Type integral to design
Design/Type eras

- **Digital** (1984–present)
  - Computer-generated type,
  - Personal and digital printers,
  - Ubiquitous hardware/software

Type legibility as a goal

- Lower-case letters with ascenders and descenders are easier to read than all upper case,
- Type with an upright style is easier to read than italics,
- Contrast, including black type on a white background, makes reading easier.
Type as digital fonts

- Computer control with digital formats: Outlined, stroked, and bitmap versions,
- OpenType is a cross-platform, outline font (Windows, Mac OS, Unix),
- “Pro” versions of OpenType can provide many characters (glyphs),
- OpenType fonts: up to 65,536 glyphs,
- Other fonts: as few as about 100 glyphs.

Different set widths

- Letters can be proportional where the width of different glyphs/characters vary:
  Proportional font
- Letters can be mono-spaced, or non-proportional, where the width of different glyphs/characters are the same:
  Mono-spaced font
Different set widths

- Advantages of using **proportional fonts** include fitting more text in an area and aesthetic control.

- Advantages of using **non-proportional fonts** include non-tabbed alignment of letters and numbers plus mimicking typewriter fonts.

Type classification

- Organizing typefaces into categories helps show similarities and differences,

- Different taxonomies exist for type classification so there is not one universal system,

- Contrasting fonts from different categories or staying within one font family is a tool for designers solving communications problems.
Type classification

- Serif fonts are letterforms with small appendages that visually form alignments along each line of type: **Serif font**

- Sans serif fonts are letterforms without small appendages and have a cleaner, more modern look: **Sans serif font**
Type classification

One typeface classification system

1. Blackletter
2. Oldstyle
3. Transitional
4. Modern
5. Square (slab) Serif
6. Sans Serif
7. Script-Cursive
8. Decorative-Display

Serif

Sans Serif

Hybrid/either
Type classification 2

Type classification

- Understanding type classifications allows a designer to use fonts like a palette of colors.

- Other ways to contrast or integrate type is by date created, type designer, etc.
Type classification

- Font names are sometimes copyrighted so similar looking fonts can have completely different names.

- Readers don’t usually know font names so font selection by name is a weak approach.

### 7 Typeface attributes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>(72 points)</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Garamond Bold, <em>Italic</em></td>
</tr>
<tr>
<td><strong>Font Name + Style</strong></td>
<td>Regular</td>
</tr>
<tr>
<td><strong>Column/measure</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Space</strong></td>
<td>(Horiz./vert.)</td>
</tr>
<tr>
<td><strong>Animation</strong></td>
<td>(motion)</td>
</tr>
</tbody>
</table>

1. **Size** (10 points)
   - This is a column of type set **flush left**. So the lines are not even on the right.
   - This is a column of type set **centered**. So the lines are not even on the left and right.
   - This is a column of type set **flush right**. So the lines are not even on the left.
   - This is a column of type set **justified**. So the lines are even on both the left and right.

2. **Color**
   - Vertical Space for this column of text is set with line space (vertically measured) equal to the font point size.

3. **Font Name + Style**
   - **Garamond Bold, Italic**

4. **Column/measure**

5. **Justification**
   - **Flush left**
   - **Centered**
   - **Flush right**
   - **Justified**

6. **Space** (Horiz./vert.)
   - **Tracked** (loose)
   - **Not Kerned**
   - **Kerned**

7. **Animation** (motion)
   - **InMotion**
   - **Not Kerned**
   - **Kerned**
Specifying type

- A standard way to describe typesetting is to define the font size, line space, set measure, font name, style, and setting:

  10/12 x 18p0  Garamond light italic, FL

A type family

- A collection of one typeface in different weights (bold, light, etc.) and styles (roman, italic, condensed),

- Using one type family can tie a communication together visually,

- Contrasting one type family with another can create variety as long as the intermixing is limited.
A type family

Garamond Premier Pro Light
Garamond Premier Pro Light Italic

Garamond Premier Pro Book/Medium
Garamond Premier Pro Book/Medium Italic

Garamond Premier Pro Semi-Bold
Garamond Premier Pro Bold Italic

Garamond Premier Pro Bold
Garamond Premier Pro Bold Italic

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Quiz

Typography Module 1

1. Name two ways that typography facilitates communication.
2. Why is type legibility important?
3. What are three ways a designer can maintain type legibility?
7. List the seven attributes type can have.
8. What makes up a type family?
9. What are the names and associated dates for typography design eras?
10. What category do the Roman fonts belong in?
11. What font category do you personally find to be the most interesting and why?
Module 2
Type vocabulary

Letterform terms

HigxR
Typeface

STEM
Cross-bar
Serif

Tittle (dot)
Counter
Shoulder
Ear
Leg

Bowl or loop
Ascender
Terminal
Aperture
Spur

Descender

Ligature: joined letters
Letterform terms

<table>
<thead>
<tr>
<th>Ligature</th>
<th>No ligature</th>
<th>Ligature</th>
<th>No ligature</th>
</tr>
</thead>
<tbody>
<tr>
<td>fi</td>
<td>fi</td>
<td>ffj</td>
<td>ffj</td>
</tr>
<tr>
<td>ff</td>
<td>ff</td>
<td>ct</td>
<td>ct</td>
</tr>
<tr>
<td>ffl</td>
<td>ffl</td>
<td>Th</td>
<td>Th</td>
</tr>
</tbody>
</table>

Type terms

Letters together make words.
Type terms

- Picas and points
  These are the units of measurement in typography:

  12 points = 1 pica
  1 pica = 1/6 inch
  (approximately)

- Picas and points
  These are the units of measurement in typography

  72 points = 6 picas
  6 picas = 1 inch
  (approximately)
Size of Picas and Points

1 inch = 6 picas = 72 points

1 pica = 12 points

( 72 pts/pica ÷ 6 picas )

How to write picas and points

Format: \#picas \ p \ #points

14picas + 2points = 14p2
14picas + 13points = 15p1 (13 pts = 1p1)
14picas + 12points = 15p0
no picas + 8points = 0p8

Type terms

x-height

These fonts are the same size.
Type terms

- Ascenders
- Descenders

Some words of type
More words of type

Type terms

Letters together make words.
Type terms

- **Measure**
  Horizontal measurements are in picas and points, like for the measure (maximum column width).
  
  Verdana font with 2\textsuperscript{nd} line
  
  Measure is 25p6
  (25 picas plus 6 points)

Type terms

- **Line space**
  Vertical distance from baseline to baseline expressed in points

Some words of type
More words of type
**Type terms**

- **Leading**
  Vertical distance from ascender to descender

Some words of type
More words of type

**Horizontal column width**
is measured in picas and points.

**Vertical distance**
is measured in points for line space, leading, and font size.

**Vertical column length**
is measured in column inches (depth).

Inconsistencies in type measurements
**Type terms**

- **Points:** Vertical measurements are in points, like for font size, line space, and leading.

**Verdana font**

*With a 2\textsuperscript{nd} line*

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Type size is measured in points — not picas
Comparative rulers show sample heights to help approximate point size.

Font size is compared to a known sample.

Font name and style

**Times New Roman, regular**

12/18 x 14p2 RR

<table>
<thead>
<tr>
<th>Font point size</th>
<th>Line spacing</th>
<th>Column width</th>
<th>Set style</th>
</tr>
</thead>
<tbody>
<tr>
<td>14picas+2points (14p2)</td>
<td>Ragged Right</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This is an example showing consistent line spacing from one baseline to the next.

Line space is distance from one baseline to the next.
This is an example of where leading is visible between lines.

**Leading** is the spacing between the descenders and the ascenders.

Leading was named for the spacing made of lead metal.
This is an example of where leading is visible between lines.

This is an example of more leading between lines.

This is an example where leading is not visible between lines.

This is an example of more leading between lines.
This is an example of no leading between lines.
This is an example of no leading between lines.

This is an example negative leading between lines.

This is known as negative leading.

Line space
– Font size

Leading
This is an example of no leading between lines.

This is an example negative leading between lines.

Font size + Leading

Line space
Quiz
Typography Module 2

1. Name the parts of letters by creating letters and then point to the parts by name.

2. What is a combination of two or more letters into one glyph called?

3. What are the names of the two main units of measure in typography?

4. Create two lines of type, one above the other, and draw their two baselines.

5. Create a line of type with ascenders and descenders and identify each.

6. Is the cap height different from the ascender height?

7. Is it possible for two fonts of the same size to look like different sizes?

8. In question 7, if so, what would be a reason for it?

9. How is leading different from line space?

10. Is font size, leading, and line space measured vertically or horizontally?
Letters (glyphs)

- Smallest basic unit of written communication,
- Letters are symbols that must be learned alone and in combination with words,
- There are 26 basic letters in the alphabet plus numbers and symbols,
- Letters, numbers, and other symbols seen on a keyboard can be augmented with other keystrokes or publishing program palettes,
- Good letter spacing within words is a function of legibility.

Letters (glyphs)

- Letterforms can be manipulated in publishing programs (stretched, compressed, etc.),
- Even letter spacing is desirable and is part of the original font metrics information,
- Tracking is increased or decreased letter spacing across a selection of type,
- Kerning is increased or decreased letter spacing between pairs of letters: OP, AV
Why is metal type of interest in the digital era?

Metal type has been in use for more than 550 years. It is the source of many terms used to describe type and it can print with a textural effect.

So understanding our past gives us context to help us understand our present evolution.
Capital letters

- Capital letters are also called upper case,
- For example: A, B, and C are all upper case and they are created on a keyboard using the shift key with a character,
- Small letters are called lower case,
- For example: a, b, and c are all lower case,
- The terminology came from use of metal type where letters were organized in cases with one placed above the other.

drawers

The top area of this cabinet is designed to hold the drawers (type cases) pulled out and placed on the cabinet top for letter-by-letter hand assembly of set type.
Metal type cases

- The California Job case was a popular standard for organizing loose type letters, and varying letter and word spaces.
- The case was designed with different sized compartments.
- Proportionally, there are more vowel letters in Western language than consonant letters.
- Each metal type case/drawer was one font (one size and style).
California Job case layout

A hand typesetter could set more than 60 words per minute.

Font display for Minion Pro
Letters (glyphs)

- The previous full font specimen shows a diverse set of glyphs,
- More than letters combining into words, some glyphs can be assembled in a way that they form ornaments or illustrations,
- Special glyphs can represent different languages, symbols, etc.

Don’t use fake fractions

<table>
<thead>
<tr>
<th>Font Name</th>
<th>Fractions Fake</th>
<th>Proper</th>
<th>Fractions Fake</th>
<th>Proper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garamond</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Premier Pro</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Times</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>New Roman</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Verdana</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Frutiger CE 55</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
</tbody>
</table>
Quiz
Typography Module 3

1. Letters can be called glyphs. True or False?

2. Are glyphs the smallest units of written communication?

3. Proportional fonts have characters of differing widths. True or False?

4. If a font isn’t the style you like, it’s good practice to change the font properties instead using original fonts. True or False?

5. Define tracking.

6. Create a line of type with tracking increased for it’s native setting.

7. Define kerning

8. Create an example showing decreased kerning.

9. Fonts can allow a designer to be an illustrator. True or False?

10. What is the difference between a hyphen, an en dash and an em dash?

Introduction to Western Languages
Typography

Module 4
Words
“When words are scarce they are seldom spent in vain.”

William Shakespeare
Writer

Words are purposeful collections of letters

- Letters combine to create words.
- A word is a language unit.
- Words are semiotic in that they are a collection of abstract symbolic glyphs whose meaning must be learned.
- A word can have multiple meanings.
Words have syllables

- Syllables are word sound parts—pronounced components—designers need to honor.

- For example, typography is spoken as ty POG ra phy. This represents four syllables and one or more may have spoken emphasis.

- When a word is broken at the end of a line, it can be split up from one line to the next using a hyphen at a syllable break:

  The digital era is liberating typography because now the imaginable is implementable.

Words require separation

- Words are separated by horizontal space and lines of words are separated by vertical space (line space/leading).

- Horizontal word space is usually slightly more than the width of a lower case letter i.
Words contained by margins

- There are four main kinds of left and right margin justifications affecting word space.
  
  **Flush left**
  **Centered**
  **Flush right**
  **Justified**

Words are separated

- It is desirable to have even word spacing for easier reading.
- Type set flush left (ragged right) may cause some lines to end shorter than the set width but the word space will remain consistent.
- When type is set justified, the word spacing increases or decreases to keep the margins flush left and flush right on every line.
Words are separated evenly with FL and FR

Flush Left
Even word space

The most emphatic place in a clause or sentence is the end. This is the climax; and, during the momentary pause that follows, that last word continues, as it were, to reverberate in the reader’s mind. It has, in fact, the last word.
—F. L. Lucas

Word spaces are shown in green. These are all even.

Words are separated unevenly with justified

Justified with last lines centered
Uneven word space

The most emphatic place in a clause or sentence is the end. This is the climax; and, during the momentary pause that follows, that last word continues, as it were, to reverberate in the reader’s mind. It has, in fact, the last word.
—F. L. Lucas

Word spaces are shown in green. These are uneven.
Improved justified word spacing

The most emphatic place in a clause or sentence is the end. This is the climax; and, during the momentary pause that follows, that last word continues, as it were, to reverberate in the reader's mind. It has, in fact, the last word.

—F. L. Lucas

Word spaces are shown in green. These are more even.

Words set as all caps are harder to read

THE MOST EMPHATIC PLACE IN A CLAUSE OR SENTENCE IS THE END. THIS IS THE CLIMAX; AND, DURING THE MOMENTARY PAUSE THAT FOLLOWS, THAT LAST WORD CONTINUES, AS IT WERE, TO REVERBERATE IN THE READER'S MIND. IT HAS, IN FACT, THE LAST WORD.

—F. L. Lucas
Small caps for quiet emphasis

The most emphatic place in a clause or sentence is the end. This is the climax; and, during the momentary pause that follows, that last word continues, as it were, to reverberate in the reader’s mind. It has, in fact, the last word.

—F. L. LUCAS

Quiz

Typography Module 4

1. What is a word?
2. In what ways are words separated from each other?
3. What happens to horizontal word spacing with type set flush left versus type set justified?
4. What is a syllable?
5. How are words broken up for hyphenation?
Introduction to Western Languages Typography

Module 5
Sentences

“
For me, the big chore is always the same: how to begin a sentence, how to continue it, how to complete it.

Claude Simon
Writer

“
Sentences

- A sentence is a grammatical statement usually written with a subject and predicate.
- The first word starts with a capital letter, and the sentence ends with a period or similar punctuation.
- In typography, after the final punctuation, there is one character space separating one sentence from the next one—not two spaces.

Phrases (sentence parts)

- A phrase is a short grammatical statement usually missing a subject or a verb so it is not a complete sentence.
- The first word may or may not start with a capital letter, and the a phrase does not end with a period or similar punctuation.
- Words making up a phrase may take up more than one line of type.
- Phrases are often found in headlines, subheads, pull quotes, etc.
Sentence line breaks

- When a sentence or phrase requires more than one line then breaks are required.
- Broken words at line endings require hyphens to separate the syllables.
- An aesthetic limit of two line endings in a row with hyphens is tolerable but more aligned hyphens create an optical indent.
- Larger fonts used for headlines, etc., should avoid ending a line with a preposition.

Anatomy of multi lines

- **Line space**
  Vertical distance from baseline to baseline

Some words of type

More words of type
Anatomy of multi lines

- **Ascenders and descenders**
  Tops of capital letters  Bottoms of letterforms going below the baseline

Some words of type
More words of type

Type “set solid”
Vertical distance from baseline to baseline allows ascenders & descenders to just touch if font point size = leading/line space

Some words of type
More words of type

Baseline vertical measurement (in points)
Anatomy of multi lines

- **Negative leading**
  Vertical distance from baseline to baseline decreased to the point that it allows ascenders & descenders to overlap, if they are on top of each other.

Some words of type

More words to show

Anatomy of multi lines

- **Negative leading**
  When there are all capital (upper case) letters the words can be set this way because they usually have no descenders to overlap with cap-height letters.

CAPITAL LETTERS DON’T USUALLY HAVE DESCENDERS
Anatomy of multi lines

- Negative leading

Upper and lower case letters have a tighter look set this way but avoid overlaps.

CAUTION

Too many words using negative leading impairs legibility.
Quiz

Typography  Module 5

1. What is a sentence?

2. What is the proper amount of character space between sentences: one space, two spaces, three spaces

3. What is a phrase?

4. In a narrow measure, would type be easier to read if it were set with negative leading?

5. What is negative leading?

6. What does the phrase "set solid" mean?
A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts.

William Shrunk, Jr.
Writer

Paragraphs

- A paragraph is a distinct portion of written or printed matter dealing with a particular idea.
- Consistency is important: keep paragraph styles to achieve this.
- Paragraphs may be visually grouped by use of subheads to help the reader quickly comprehend the overall content organization.
Paragraphs

- Paragraphs (also words and sentences) may be continued from one page to another with “jumps”.

- Paragraphs in columns of text stop and start (break) their lines best when two or more lines are at the end of a column and/or start of the following column.

- The width of a column of typeset paragraphs is optimal for longer stories at about 1.5 times the length of the lower case alphabet length for the font used.

    abcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz

The computer aligns objects sometimes differently than our eyes see them.

- **Optical alignment**: placement used to visually align design elements.

- **Metrics/mechanical alignment**: how the computer is programmed to handle type or objects.
Paragraphs

- How much line space is best for a paragraph is determined on an individual basis.
- Paragraphs set within narrower columns may need less line space than columns that have a wide measure.
- Paragraphs should look inviting and not tire or confuse the reader because of careless design.

Paragraphs

- No one way of specifying type works for all fonts.
- Each typographic solution must be determined on individual merits of legibility, aesthetics, and communications goal for target audience.
Paragraph examples

- Initial drop cap
- Indent
- Type set flush left, ragged right, even word-spaced look

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Once thing was certain, that the WHITE kitten had had nothing to do with it. It was the black kitten that mattered. For the white kittens had been having their face washed by the old cat for the first quarter of an hour (and hearing it purr well, considering) so you see it COULDN'T have had any hand in the whisking.

The very Dinah washed her childish face was this: first she held the poor thing down by its ears with one paw, and then with the other paw she rubbed it all over, the wrong way, beginning at the nose and left down, as I said, she was hard at work on the white kitten, which was biting quite still and trying to purr—no doubt feeling that it was all mean for it.

---

Paragraph examples

- Line space separates paragraphs instead of indents
- Each new paragraph line starts flush left
- Less contiguous so reader confusion could result

---
Paragraph examples

- **Justified** paragraphs (flush left and right margins) give columns more formal, geometric look.

- **Justified type** has variable word spaces which requires better control of justification parameters.

---

**Paragraph examples**

- **Indents** separate paragraphs instead of line space for cohesive look.

- **Avoid using both indents and extra line space to separate paragraphs**
Some Typographic Transgressions

- Improperly constructed “fake” fractions
- Reader confusion about order of threaded columns — don’t lose your reader
- Inconsistent styles of type and images
- Mis-use or over-use of bold and italic fonts for emphasis

Some Typographic Transgressions

- Two hyphens representing an em dash instead of using the real em dash (em dash is a parenthetical pause)
- One hyphen to represent a longer en dash instead of using the real en dash (en dash is a connector for periods to time, space, etc., like the word “through” or “to”)
- Use of a colon after a subhead that sits alone on a line (it’s redundant)
Correctly used Em dash

- A glyph that looks like a very long hyphen (equal to an em space or width of a capital letter M) that represents a parenthetical pause for added emphasis:

I never heard of an em dash—until now.

Use em dashes sparingly—not like here—where commas would work.

Correctly used En dash

- A glyph that is slightly longer than a hyphen (equal to an en space) that represents a distance or continuation and can also combine open compounds:

The semester will last from January–May.
Your reading assignment is for pages 5–12.

It’s along the California–Mexico border.
Some Typographic Transgressions

- Too many hyphens in a row
- Widows and Orphans — typeset distractions
- Rivers in text columns (vertically aligned groups of word space that can snake through columns of text from line to line and disrupt type “color”)
- Poor craftsmanship: uneven type “color”
- Illegibility

Too many hyphens

The use of multiple hyphens in a row can make text difficult to read and understand.
Widows...Orphans

An issue that’s national, such as immigration, boiling

Rivers

in text columns

"We have three basic flavors of chocolate, vanilla and red velvet and then we have our specialty cupcakes," Khan said.

The specialty cupcakes include caramel apple, an apple cupcake with caramel frosting, s’mores cupcake, a chocolate cupcake topped with marshmallow frosting complete with graham cracker crumbs, and a Twix cupcake, a chocolate cupcake topped with shortbread and caramel.

"We love to experiment and try new recipes," Khan said. "We are always open to take requests."

The chocolate cupcake with Nutella butter cream frosting can satisfy any chocolate-lover’s sweet tooth.

The frosting is shockingly light and flavorful as the Nutella and butter cream forms a sweet relationship sitting on the chocolate cake.

Other items on the menu include cheesecake bites for $2.50/dozen, cookies in various flavors for $6/dozen, cake pops with the buyer’s choice of cake doused in frosting for $1.25 each and assorted brownies for $10/dozen.

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Quiz
Typography Module 6

1. Define a paragraph.

2. What is a subhead and how can it be utilized?

3. What is a jump?

4. Is typographic design consistency important?

5. What are the minimum number of lines needed at the bottom or top of a column when a paragraph breaks?

6. Would a 12 point Times New Roman set at 48 picas wide be easier to read with 12 points of line space or 18 points of line space?

7. Is even word space and type color easier to achieve with type columns set flush left or justified?
1. Name the parts of letters by creating letters and then point to the parts by name. 
   Answer: see original slides
2. What is a combination of two or more letters into one glyph called? Answer: ligature
3. What are the names of the two main units of measure in typography? Answer: points and picas
4. Create two lines of type, one above the other, and draw their two baselines.
5. Create a line of type with ascenders and descenders and identify each.
6. Is the cap height different from the ascender height? Answer: Yes. Some fonts vary.
7. Is it possible for two fonts of the same size to look like different sizes? Answer: Yes
8. In question 7, if so, what would be a reason for it? Answer: Larger or smaller x-heights can make fonts look different sizes but the ascender and descender heights will still be close to each other. More or less line spacing is needed to ensure ease of reading for different fonts of a given size.
9. How is leading different from line space? Answer: Leading is the vertical distance between lines of type and line space is the total vertical distance from one baseline of type to the next baseline of type that is the sum of font size and leading.
10. Is font size, leading, and line space measured vertically or horizontally? Answer: vertically. Horizontal measurement is in picas and points for type measure (width).
Quiz

Typography Module 2

1. Name two ways that typography facilitates communication. Answer: Giving language a physical body/form; amplifying and shaping content appropriate for each communication, enabling social flow of information.

2. Why is type legibility important? Answer: If the reader can’t make sense of the words on the page, through poor typography, ink density or layered and competing visual effects of design then all of the work that went into it is incomprehensible.

3. What are three ways a designer can maintain type legibility? Answer: Choose a font that is easy to read in context and for the audience by size, line spacing, column measure, color, contrast, style, look at the computer monitor at actual printed size to test it, time the viewer will have to read it, in the right language, etc.

4. List the seven attributes type can have. Answer: Size, color, font name + style, column/measure, justification style, horizontal and vertical spacing (tracking and line space/leading), and animation (or not).

5. What makes up a type family? Answer: it's a collection of one name of font with style variations like italic, bold, light, condensed, etc.

6. What are the names and associated dates for typography design eras? Answer: Pre-Gutenberg (<1455); Gutenberg (1456–1760); Industrial (1761–1890); Artistic (1891–1983); Digital (1984–present)


8. What font category do you personally find to be the most interesting and why?

Quiz

Typography Module 3

1. Letters can be called glyphs. True or False? Answer: True.

2. Are glyphs the smallest units of written communication? Answer: True.

3. Proportional fonts have characters of differing widths. True or False? Answer: True

4. If a font isn’t the style you like, it’s good practice to change the font properties instead using original fonts. True or False? Answer: False. Respect the designer’s original font metrics and avoid alterations. Instead consider a font that is closer to the look you need.

5. Define tracking. Answer: Altering the width of selected letters. Kerning is a subset of tracking where letter pairs have their space altered.

6. Create a line of type with tracking increased from it's native setting. Answer: It should show more space between letters and words in a line of type compared to the original line.

7. Define kerning. Answer: Kerning is a subset of tracking where letter pairs have their space altered.

8. Create an example showing decreased kerning. Answer: It should show less space between a letter pair.

9. Fonts can allow a designer to be an illustrator. True or False? Answer: True. Fonts like Webdings have glyphs that are illustrations tied to keys like letters are. These illustrations can be manipulated like fonts in size, color, rotation, etc.
Quiz
Typography Module 4

1. What is a word? **Answer:** A word is a language unit, consisting of one or more spoken sounds or written representations, that carry meaning.

2. In what ways are words separated from each other? **Answer:** Separation is achieved by horizontal and vertical spacing through justification and line spacing/leading adjustments.

3. What happens to horizontal word spacing with type set flush left versus type set justified? **Answer:** Justified type requires more control of word spacing since type set FL or FR has consistent word spacing as a default.

4. What is a syllable? **Answer:** A syllable is a word sound part that is spoken collectively with the other syllables in a word to pronounce it. One or more syllables may have spoken emphasis.

5. How are words broken up for hyphenation? **Answer:** Syllables create natural breaking points in words and hyphens are used at the end of lines where those word breaks happen. Too many hyphens in a row at the end of lines create a visual dent in the margin.

Quiz
Typography Module 5

1. What is a sentence? **Answer:** A sentence is a grammatical statement usually written with a subject and predicate.

2. What is the proper amount of character space between sentences: one space, two spaces, three spaces? **Answer:** With typography, only one space is used after a period and before the next sentence. It creates a more even type color when reading without extra spaces.

3. What is a phrase? **Answer:** A phrase is a short grammatical statement usually missing a subject or a verb so it is not a complete sentence and does not require a period at the end.

4. In a narrow measure, would type be easier to read if it were set with negative leading? **Answer:** No. Narrower columns require more line spacing but proportionally decreasing the font size can help.

5. What is negative leading? **Answer:** It is an amount of line spacing less than the point size.

6. What does the phrase “set solid” mean? **Answer:** It means that the font size is numerically equal to the line spacing.
Quiz
Typography Module 6

1. Define a paragraph. Answer: A paragraph is a distinct portion of written or printed matter dealing with a particular idea, sometimes beginning with an indentation or extra vertical line space and usually containing two or more sentences.

2. What is the difference between optical alignment and metric alignment? Answer: Optical alignment is based on human judgment and metric alignment is based on computer codes/rules/programming.

3. What is a jump? Answer: Sometimes called a continuation line, it’s a break in a story that is continued in another part of the publication with a page reference to the new location.

4. Is typographic design consistency important? Answer: Yes. Although there can be reasons for variations in style consistency, it is a good idea to use the power of styles to manage a particular way of presenting information and to uphold the brand identity.

5. What are the minimum number of lines needed at the bottom or top of a column when a paragraph breaks? Answer: There should be at least two lines at the top or bottom of a breaking column paragraph.

6. Would a 12 point Times New Roman set at 48 picas wide be easier to read with 12 points of line space or 18 points of line space? Answer: While 12 points of line space is still legible, it can be fatiguing for lots of text to read it when it is set solid at the measure. The 18 points would be the easier to read but it would space out the lines vertically more than on 12 points of line space.

7. Is even word space and type color easier to achieve with type columns set flush left or justified? Answer: Flush left typesetting produces even color but the challenge is with smooth looking right column edges.

Discussion & Practice
Typography Module 1

1. Bring in print examples of magazines and newspapers for class discussion about font use.

2. Identify a publication’s use of fonts by classification.

3. Who is the audience and what is the audience’s reading preference? Are the use of fonts appropriate for the audience? If not, how should they be used differently?
Discussion & Practice
Typography Module 2

1. Bring in print examples of magazines and newspapers for class discussion.
2. Identify a two- or three-line headline and measure the font’s point size.
3. Measure the linespace (baseline to baseline) in points.
4. Find a column of type and express the horizontal “measure” in picas and points.

Discussion & Practice
Typography Module 3

1. Bring in print examples of magazines and newspapers for class discussion.
2. Identify special glyphs and name them.
3. Find instances of hyphens, en dashes and em dashes and state why they were used.
Discussion & Practice
Typography Module 4

1. Bring in print examples of magazines and newspapers for class discussion.

2. Identify different treatments of words in headlines, decks, bylines, text, photo captions/cutlines, credits, pull quotes, etc.

3. Find instances of good and bad typography using flush left and justified margin settings. Discuss how they could be improved or how they succeeded.

Discussion & Practice
Typography Module 5

1. Bring in print examples of magazines and newspapers for class discussion. Find examples of negative leading, and extra line space in headlines and text.

2. Identify proper use of headline line breaks (lines not ending with prepositions: on, over, under, through, to, from, between, etc.—there are about 150 in English)

3. Compare line spacing in different publications based on their font sizes and column measures. Which are most successful for legibility?

4. Use the type rulers to determine font size, line space, and leading in specific examples.
Discussion & Practice
Typography Module 6

1. Bring in print examples of magazines and newspapers for class discussion.

2. Identify examples of poor typographic craftsmanship.

3. Identify problems with layout and legibility then describe ways the problems could be avoided.

4. Find and describe any inconsistencies in typographic styles used in the publication. What would be the best design to choose for competing styles?

Appendix
Typography Modules

File on CD

NOTE
When printing out the type rulers (TypeRulers.pdf) be sure it is output at exactly 100% otherwise it won’t be accurate for use.
Appendix

Use InDesign to build proper fractions not included in font sets

Don’t use this otherwise known as the common slash: /

Use this slightly longer division-slash glyph which tilts more: /

Type the first, top, number as the numerator: 5

Open the glyphs palette and select the division slash: Type->Glyphs.

Type the second, bottom number as the denominator: 5/32

Select the numerator and make it a superscript: \( \frac{5}{32} \)

Select the denominator and make it a subscript: \( \frac{5}{32} \)

Baseline shift to lower the top number and raise the bottom: \( \frac{5}{32} \)

Adjust the baseline from the Character palette and the superscript and subscripts from the fly-out Character palette menu.

YouTube videos

- Helvetica movie short w/ Eric Speakerman
  [http://www.youtube.com/watch?v=McZSUJp1AcE&feature=related](http://www.youtube.com/watch?v=McZSUJp1AcE&feature=related)

- Eric Speakerman interview
  [http://www.youtube.com/watch?v=F691weEVpwc&feature=related](http://www.youtube.com/watch?v=F691weEVpwc&feature=related)

- Golden Arm titles: Saul Bass
  [http://www.youtube.com/watch?v=sS76whmt5Yc&feature=related](http://www.youtube.com/watch?v=sS76whmt5Yc&feature=related)

- Saul Bass short interview
  [http://www.youtube.com/watch?v=i-WzF-XBILw](http://www.youtube.com/watch?v=i-WzF-XBILw)
Appendix
Instructor materials: slide set with added content
Type facilitates

- Giving language a physical body/form,
- Amplifying and aesthetically shaping content appropriate for each communication,
- Enabling social flow of information.

Type legibility

- Type needs to be readable/legible to carry the communication to the reader.
- Some fonts work better than others at different sizes and in different contexts.
- Size, spacing, and amount of type are a function of legibility as are different reader constraints like age (eye sight), lighting, colors, and fidelity of type reproduction.
Design/Type eras

- **Pre-Gutenberg** (<1455)
- **Gutenberg** (1456–1760)
- **Industrial** (1761–1890)
- **Artistic** (1891–1983)
- **Digital** (1984–present)

**Pre-Gutenberg (<1455)**

- Hand produced

Wall paintings, clay tablets, stone carvings (<40,000 BCE)
Egyptian Book of the Dead (<1500 BCE–50 BCE)
Dead Sea Scrolls (<150 BCE–70 CE)
Book of Kells (<800 CE)
Design/Type eras

- **Gutenberg** (1455–1760)
  - Blossoming of printing
  - Increased literacy (more to read)
  - Roman fonts replace Blackletter

Even paperbacks made their appearance
Italic fonts allowed more type per page

Design/Type eras

- **Industrial** (1761–1890)
  - Mechanics controlled design,
  - Efficiency over aesthetics,
  - Disproportionate ads emphasis,
  - Typeface effects, not integrated

Slow time for type design and evolution for books, newspapers, leaflets, posters
Design/Type eras

- **Artistic** (1891–1983)
  - Type design improved, respected,
  - Words and images combined well,
  - Type integral to design

All visual media embraced typography

- **Digital** (1984–present)
  - Computer-generated type,
  - Personal and digital printers,
  - Ubiquitous hardware/software

Designers enjoyed unlimited typographic control
Type available to the masses
Beyond print: e-readers to see the results
Type legibility as a goal

- Lower-case letters with ascenders and descenders are easier to read than all upper case (capital letters),

- Type with an upright style is easier to read than italics that are slanted/oblique,

- Contrast, including black type on a white background, makes reading easier than with low-contrast colors, patterned backgrounds, or much white type on black.

Type as digital fonts

- Computer control with digital formats: Outlined, stroked, and bitmap versions,

- OpenType is a cross-platform, outline font (Windows, Mac OS, Unix), compared to less compatible TrueType, PostScript, and others,

- “Pro” versions of OpenType can provide many characters (glyphs), ligatures, beyond the obvious keyboard choices,

- OpenType fonts: up to 65,536 glyphs,

- Other fonts: as few as about 100 glyphs.
Different set widths

- Letters can be proportional where the width of different glyphs/characters vary:
  
  **Proportional font**

- Letters can be mono-spaced, or non-proportional, where the width of different glyphs/characters are the same:
  
  **Mono-spaced font**

Advantages of using proportional fonts include fitting more text in an area and aesthetic control.

Advantages of using non-proportional fonts include non-tabbed alignment of letters and numbers plus mimicking typewriter fonts. Columns of numbers are easier to align since each number takes equal width space.
Type classification

- Organizing typefaces into categories helps show similarities and differences,

- Different taxonomies exist for type classification so there is not one universal system,

- Contrasting fonts from different categories or staying within one font family is a tool for designers solving communications problems.

Type classification

- Serif fonts are letterforms with small appendages that visually form alignments along each line of type: Serif font

- Sans serif fonts are letterforms without small appendages and have a cleaner, maybe more modern look: Sans serif font
Type classification

Western languages

Eight classifications

1. Blackletter
2. Oldstyle
3. Transitional
4. Modern
5. Square (slab) Serif
6. Sans Serif
7. Script-Cursive
8. Decorative-Display

Three categories

- Serif
- Sans Serif
- Hybrid/either

Type classification

One typeface classification system

1. Blackletter
2. Oldstyle
3. Transitional
4. Modern
5. Square (slab) Serif
6. Sans Serif
7. Script-Cursive
8. Decorative-Display
Type classification

Eight breakdowns
1. Blackletter
2. Oldstyle
3. Transitional
4. Modern
5. Square (slab) Serif
6. Sans Serif
7. Script-Cursive
8. Decorative-Display

Three categories
1. Serif
2. Sans Serif
3. Hybrid/either

Roman subset of serif

Subset of Sans Serif

Grotesque
Franklin Gothic

Transitional
Arial, Helvetica

Humanist
Verdana, Myriad

Geometric
Futura, Century Gothic

Type classification 2
Type classification

- Understanding type classifications allows a designer to use fonts like a palette of colors where they can be contrasted or made harmonious.

- Other ways to contrast or integrate type is by date created, type designer, look or “color” of font at specific type setting parameters, legibility versus attention getting characteristics, etc.

Type classification

- Font names are sometimes copyrighted so similar looking fonts can have completely different names.

- Readers don’t usually know font names so font selection by name is a weak approach to contrast or unity unless the audience is a knowledgeable design community.
7 Typeface attributes

1. Size (10 points)

2. Color

3. Font Name + Style (Regular)

4. Column/Measure

5. Justification

6. Space (Horiz./Vert.)

7. Animation (motion)

Specifying type

- A standard way to describe typesetting is to define the font size, line space, set measure, font name, style, and setting:

  10/12 x 18p0  Garamond light italic, FL

This translates to 10 points set size of the Garamond font with 12 points line space, 18 picas-wide column, using the light italic style and set flush left (ragged right). Colors, effects, and other details can be added.
A type family

- A collection of one typeface in different weights (bold, light, etc.) and styles (roman, italic, condensed),

- Using one type family can tie a communication together visually,

- Contrasting one type family with another can create variety as long as the intermixing is limited. More than a few typefaces can confuse the communication.
Module 2
Type vocabulary

Letterform terms

HigxR
Typeface

Stem
Cross-bar
Serif
Tittle (dot)
Ear
Bowl or loop
Ascender
Terminal
Spur
Descender
Aperture
Shoulder
Counter
Leg
Ligature: joined letters
Letterform terms

<table>
<thead>
<tr>
<th>Ligature</th>
<th>No ligature</th>
<th>Ligature</th>
<th>No ligature</th>
</tr>
</thead>
<tbody>
<tr>
<td>fi</td>
<td>fi</td>
<td>ffj</td>
<td>ffj</td>
</tr>
<tr>
<td>ff</td>
<td>ff</td>
<td>ct</td>
<td>ct</td>
</tr>
<tr>
<td>ffl</td>
<td>ffl</td>
<td>Th</td>
<td>Th</td>
</tr>
</tbody>
</table>

Type terms

Letters together make words.
Type terms

- **Picas and points**
  These are the units of measurement in typography:

  - 12 points = 1 pica
  - 1 pica = 1/6 inch (approximately)

- **Picas and points**
  These are the units of measurement in typography

  - 72 points = 6 picas
  - 6 picas = 1 inch (approximately)
Size of Picas and Points

1 inch = 6 picas = 72 points

1 pica = 12 points

(72 pts/pica ÷ 6 picas)

How to write picas and points

Format: \#\textit{picas} \ p \ #\textit{points}

14 picas + 2 points = 14p2
14 picas + 13 points = 15p1 (13 pts = 1 p1)
14 picas + 12 points = 15p0
no picas + 8 points = 0p8

Type terms

\(x\text{-height}\)

Same-size fonts can look like different sizes because of varying x-heights.

These fonts are the same size
Type terms

- **Ascenders**: Tops of capital letters
- **Descenders**: Bottoms of letterforms going below the baseline

Some words of type
More words of type

Type terms

Letters together make words.
Type terms

- **Measure**
  Horizontal measurements are in picas and points, like for the measure (maximum column width).

Verdana font with 2\textsuperscript{nd} line

Measure is 25p6
(25 picas plus 6 points)

Type terms

- **Line space**
  Vertical distance from baseline to baseline expressed in points

Some words of type
More words of type
Type terms

- **Leading**
  Vertical distance from ascender to descender

Some words of type
More words of type

---

Horizontal column width
is measured in picas and points.

Vertical distance
is measured in points
for line space, leading,
and font size.

Vertical column length
is measured
in column inches (depth).

Inconsistencies in type measurements
Type terms

- **Points**: Vertical measurements are in points, like for font size, line space, and leading.

![Verdana font](image)

*With a 2nd line*

- 55 point font size
- 80 point line space
- 35 point leading

Type size is measured in points — not picas

Font size is measured from top of ascender to bottom of descender but precise determination is difficult because of variations in font foundary specifications and output.
Comparative rulers show sample heights to help approximate point size.

Font size is compared to a known sample.

Type specification shorthand

Font name and style
Times New Roman, regular
12/18 x 14p2 RR

Font point size  Line spacing  Column width  Set style
14picas+2points  (14p2)  Ragged Right
This is an example showing consistent line spacing from one baseline to the next.

*Line space* is distance from one *baseline* to the next.
This is an example of where leading is visible between lines.

Leading is the spacing between the descenders and the ascenders.

Leading was named for the spacing made of lead metal.
This is an example of where leading is visible between lines.

This is an example of more leading between lines.

More line space...

...because of more Leading

This is an example where leading is not visible between lines.

This is an example of more leading between lines.
This is an example of no leading between lines.

Solid is a term derived from type lines touching type lines without any added leading.

Set solid.
This is an example of no leading between lines.

This is an example negative leading between lines.

Digital type easily allows less leading than line space. This is known as negative leading.

Line space

Font size

Leading
This is an example of no leading between lines.

This is an example negative leading between lines.

Digital type easily allows less leading than line space = negative leading.

Font size + Leading ——— Line space

36 pt. L.S.
-36 pt. Font
0 pt. Leading

31 pt. L.S.
-36 pt. Font
-5 pt. Leading

Set solid.
Letters (glyphs)

- Smallest basic unit of written communication,
- Letters are symbols that must be learned alone and in combination with words since they are not visually depictive by themselves,
- There are 26 basic letters in the alphabet plus numbers and symbols,
- Letters, numbers, and other symbols seen on a keyboard can be augmented with other keystrokes or publishing program palettes,
- Good letter spacing within words is a function of legibility and varies with fonts, style, reading distance, line space, and measure.
Letters (glyphs)

- Letterforms can be manipulated in publishing programs (stretched, compressed, etc.) but the best use of a font is the native form provided by the type designer,

- Even letter spacing is desirable and is part of the original font metrics information — professional fonts have quality metrics and hinting that help with basic legibility,

- Tracking is increased or decreased letter spacing across a selection of type,

- Kerning is increased or decreased letter spacing between pairs of letters: O P, AV

Examples of glyphs:

A @ É ŵ ü ≤ …
Why is metal type of interest in the digital era?

For the last 550 years, or so, metal type has been and still is in use. It is the source of many terms used to describe type and it can print with a textural effect by physically pushing ink against paper.

So understanding our past gives us context to help us understand our present evolution.

Capital letters

- Capital letters are also called upper case,
- For example: A, B, and C are all upper case and they are created on a keyboard using the shift key with a character,
- Small letters are called lower case,
- For example: a, b, and c are all lower case,
- The terminology came from use of metal type where letters were organized in cases with one placed above the other; giving the capital letters the upper-case designation. The California Job case combined caps and lower case letters.
The top area of this cabinet is designed to hold the drawers (type cases) pulled out and placed on the cabinet top for letter-by-letter hand assembly of set type.

---

**Metal type cases**

- The California Job case was a popular standard for organizing loose type letters, and varying letter and word spaces.

- The case was designed with different sized compartments.

- Proportionally, there are more vowel letters in Western language than consonant letters and the California Job case construction shows this.

- Each metal type case/drawer was one font (one size and style).
California Job case layout

A hand typesetter could set more than 60 words per minute.
Font display for

Minion Pro

Minion Pro
InDesign provides a listing of all font glyphs and clicking on a character shows the details. Use the menu Type>Glyphs to see a display matrix like this.

The previous full font specimen shows a diverse set of glyphs,

More than letters combining into words, some glyphs can be assembled in a way that they form ornaments or illustrations,

Special glyphs can represent different languages, math symbols, properly-constructed fractions, ordinals, lining and mono-spaced numbers, superscripts, subscripts, currency, ligatures, building blocks for visual constructs, etc.
Don’t use fake fractions

<table>
<thead>
<tr>
<th>Font Name</th>
<th>Fractions</th>
<th>Proper</th>
<th>Fake</th>
<th>Proper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garamond Premier Pro</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Times New Roman</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Verdana</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Frutiger CE 55</td>
<td>1/2</td>
<td>1/2</td>
<td>3/4</td>
<td>3/4</td>
</tr>
</tbody>
</table>
When words are scarce they are seldom spent in vain.

William Shakespeare
Writer

Words are purposeful collections of letters

- Letters combine to create words.
- A word is a language unit, consisting of one or more spoken sounds or written representations, that carry meaning.
- Words are semiotic in that they are a collection of abstract symbolic glyphs whose meaning must be learned.
- A word can have multiple meanings so context is important and design can assist in comprehension.
Words have syllables

- Syllables are word sound parts—pronounced components—designers need to honor.

- For example, *typography* is spoken as **ty POG ra phy**. This represents four syllables and one or more may have spoken emphasis.

- When a word is broken at the end of a line, it can be split up from one line to the next using a hyphen at a syllable break:

> The digital era is liberating *typography* because now the imaginable is implementable.

Words require separation

- Words are separated by horizontal space and lines of words are separated by vertical space (line space/leading).

- Horizontal word space is usually slightly more than the width of a lower case letter *i*,

- This horizontal spacing is automatically done when typing by tapping the *spacebar*.

- *Spacebar width values vary based on the type of margin/justification setting, metric, optical, or selective parameters.*
Words contained by margins

There are four main kinds of left and right margin justifications affecting word space.

**Flush left**

**Centered**

**Flush right**

**Justified**
- fully, left and right margins aligned
- Last line flush left
- Last line centered
- Last line flush right
- Last line fully justified

Also **Align towards** and **Align Away** from the publication's spine for Flush Right, Left

Words are separated

It is desirable to have even word spacing for easier reading.

Type set flush left (ragged right) may cause some lines to end shorter than the set width but the word space will remain consistent.

When type is set justified, the word spacing increases or decreases to keep the margins flush left and flush right on every line.

Well set justified type (for good type “color” including word and letter spacing) has the justification parameters custom set for the particular typographic conditions.
Words are separated evenly with FL and FR

Flush Left
Even word space

The most emphatic place in a clause or sentence is the end. This is the climax; and, during the momentary pause that follows, that last word continues, as it were, to reverberate in the reader’s mind. It has, in fact, the last word.

—F. L. Lucas

Word spaces are shown in green. These are all even.

Words are separated unevenly with justified

Justified with last lines centered
Uneven word space

The most emphatic place in a clause or sentence is the end. This is the climax; and, during the momentary pause that follows, that last word continues, as it were, to reverberate in the reader’s mind. It has, in fact, the last word.

—F. L. Lucas

Word spaces are shown in green. These are uneven.
The most emphatic place in a clause or sentence is the end. This is the climax; and, during the momentary pause that follows, that last word continues, as it were, to reverbate in the reader’s mind.

It has, in fact, the last word.

—F. L. Lucas

Words set as all caps are harder to read

THE MOST EMPHATIC PLACE IN A CLAUSE OR SENTENCE IS THE END. THIS IS THE CLIMAX; AND, DURING THE MOMENTARY PAUSE THAT FOLLOWS, THAT LAST WORD CONTINUES, AS IT WERE, TO REVERBERATE IN THE READER’S MIND. IT HAS, IN FACT, THE LAST WORD.

—F. L. Lucas
Small caps for quiet emphasis

The most emphatic place in a clause or sentence is the end. This is the climax; and, during the momentary pause that follows, that last word continues, as it were, to reverberate in the reader’s mind.

It has, in fact, the last word.

—F. L. LUCAS

Small caps are as tall as the x-height and they have the same stroke weight at the other letters in the font. They are good for emphasis and names.

Introduction to Western Languages Typography

Module 5
Sentences
For me, the big chore is always the same: how to begin a sentence, how to continue it, how to complete it.

Claude Simon
Writer

Sentences

- A sentence is a grammatical statement usually written with a subject and predicate.
- The first word starts with a capital letter, and the sentence ends with a period or similar punctuation.
- Words making up a sentence may take up more than one line of type.
- In typography, after the final punctuation, there is one character space separating one sentence from the next one—not two spaces.
Phrases (sentence parts)

- A phrase is a short grammatical statement usually missing a subject or a verb so it is not a complete sentence.
- The first word may or may not start with a capital letter, and the a phrase does not end with a period or similar punctuation.
- Words making up a phrase may take up more than one line of type.
- Phrases are often found in headlines, subheads, pull quotes, etc.

Sentence line breaks

- When a sentence or phrase requires more than one line then breaks are required.
- Word-space breaks are natural line endings.
- Broken words at line endings require hyphens to separate the syllables.
- An aesthetic limit of two line endings in a row with hyphens is tolerable but more aligned hyphens create an optical indent.
- Larger fonts used for headlines, etc., should avoid ending a line with a preposition.
Anatomy of multi lines

- **Line space**
  Vertical distance from baseline to baseline

Some words of type
More words of type

- **Ascenders and descenders**
  Tops of capital letters and tops of lower case letters like f, t, h, etc. Some lower case letters can be taller than capitals.
  Bottoms of letterforms going below the baseline like y, p, q, etc.

Some words of type
More words of type
Anatomy of multi lines

- **Type “set solid”**
  Vertical distance from baseline to baseline allows ascenders & descenders to just touch if font point size = leading/line space

Some words of type
More words of type

Baseline vertical measurement
(in points)

---

Anatomy of multi lines

- **Negative leading**
  Vertical distance from baseline to baseline decreased to the point that it allows ascenders & descenders to overlap, if they are on top of each other.

Some words of type
More words to show
Anatomy of multi lines

- **Negative leading**
  When there are all capital (upper case) letters the words can be set this way because they usually have no descenders to overlap with cap-height letters.

**CAPITAL LETTERS DON’T USUALLY HAVE DESCENDERS**

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Anatomy of multi lines

- **Negative leading**

**Upper and lower case letters have a tighter look set this way but avoid overlaps.**
Anatomy of multi lines

- **Negative leading**

  **CAUTION**

  Too many words using negative leading impairs legibility.

Upper and lower case letters have a tighter look set this way but avoid overlaps.

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**Introduction to Western Languages Typography**

**Module 6**

Paragraphs
A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts.

William Shrunk, Jr.
Writer

Paragraphs

- A paragraph is a distinct portion of written or printed matter dealing with a particular idea, sometimes beginning with an indentation or extra vertical line space and usually containing two or more sentences.

- Consistency is important: keep paragraph styles to always maintain indents or extra line space, a drop cap, or some other visual elements

- Paragraphs may be visually grouped by use of subheads to help the reader quickly comprehend the overall content organization.
Paragraphs (also words and sentences) may be continued from one page to another with “jumps” or continuations that show what page to turn to or from.

Paragraphs in columns of text stop and start (break) their lines best when two or more lines are at the end of a column and/or start of the following column.

The width of a column of typeset paragraphs is optimal for longer stories at about 1.5 times the length of the lower case alphabet length for the font used.

The computer make alignments based on object programming rules and font metrics supplied by the type designer. Our eyes see arrangements based on optical alignment. These two systems can be at odds with each other so the designer must make the aesthetic call about which implementation is best.

- **Optical alignment**: placement used to visually align design elements, allowing glyphs to extend into margins like quote marks, hyphens, and below baselines like letters O, C, Q, etc.

- **Metrics/mechanical alignment**: how the computer is programmed to handle type or objects which may differ from what our eyes see as optically aligned.
Paragraphs

- How much line space is best for a paragraph is determined on an individual basis. Many publishing programs start with a default of 120% of the font size (in points) as the line space (in points).

- Paragraphs set within narrower columns may need less line space than columns that have a wide measure. Designers need to try variations for each font to see what settings provide the best legibility and aesthetics.

- Paragraphs should look inviting and not tire or confuse the reader because of careless design.

Paragraphs

- No one type specification works for all font sizes, line spacing, column measures, styles, column gutters, or justification parameters like flush left, justified, flush right, centered, etc.

- Each typographic solution must be determined on individual merits of legibility, aesthetics, and communications goal for target audience.
Paragraph examples

- Initial drop cap
- Indent
- Type set flush left, ragged right, for slightly less formal, even word-spaced look
- Line space separates paragraphs instead of indents
- Each new paragraph line starts flush left
- Less contiguous so reader confusion could result

Once thing was certain: that the white kitten had nothing to do with it. It was the black kitten who was guilty. For the white kitten had been having its face washed by the old cat for the last quarter of an hour (and hearing it purr well, considering), so you see it couldn’t have had any hand in the mischief.

The very Dinah washed her children’s faces was this: first she held the poor thing down by its ear with one paw, and then with the other paw she rubbed it all over, even the wrong way, beginning at the nose and left front, as I said, she was hard at work on the white kitten, which was trying quite still and trying to put no doubt but that it was all mean for its good.

Dinah ought to have taught you better manners! You ought, Dinah, you know you ought!’ she added, looking reproachfully at the old cat, and speaking in a cross voice and she could manage—and then she scrambled back into the armchair, taking the kitten and the wasn’t worried with her, and began winding up the bell again. But she didn’t get on very fast, as she was telling all the time, sometimes to the kitten, and sometimes to herself. ‘Kitty sat very demurely on her knees, pretending to watch the progress of the winding, and now and again putting one paw and gently touching the bell, as if it would be glad to help, if it might.

Do you know what tomorrow in Kitty? Alice began. ‘You’ve guessed if you’d been up in the window with me, was very nearly opening the window, and putting you out into the moonlight, and it would have been too bad, as Dinah would have come in and scared you. I went out to look for myself. How do you manage it then? I was looking up on the floor, looking up on the floor. ’ ‘Do you know what tomorrow in Kitty? Alice begun. ‘You’ve guessed if you’d been up in the window with me, was very nearly opening the window, and putting you out into the moonlight, and it would have been too bad, as Dinah would have come in and scared you. I went out to look for myself. How do you manage it then? I was looking up on the floor, looking up on the floor.'
Paragraph examples

- **Justified paragraphs** (flush left and right margins) give columns more formal, geometric look.

- **Justified type** has variable word spaces which requires better control of justification parameters.

- **Indents separate paragraphs instead of line space for cohesive look**

- **Avoid using both indents and extra line space to separate paragraphs**

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Some Typographic Transgressions

- Improperly constructed “fake” fractions
- Reader confusion about order of threaded columns — don’t lose your reader
- Inconsistent styles of type and images
- Mis-use or over-use of bold and italic fonts for emphasis

- Two hyphens representing an em dash instead of using the real em dash (em dash is a parenthetical pause)
- One hyphen to represent a longer en dash instead of using the real en dash (en dash is a connector for periods to time, space, etc., like the word “through” or “to”)
- Use of a colon after a subhead that sits alone on a line (it’s redundant)
**Correctly used Em dash**

- A glyph that looks like a very long hyphen (equal to an em space or width of a capital letter M) that represents a parenthetical pause for added emphasis:

  I never heard of an em dash—until now.

  Use em dashes sparingly—not like here—where commas would work.

**Correctly used En dash**

- A glyph that is slightly longer than a hyphen (equal to an en space) that represents a distance or continuation and can also combine open compounds:

  The semester will last from January–May.
  Your reading assignment is for pages 5–12.

  It’s along the California–Mexico border.
Some Typographic Transgressions

- Too many hyphens in a row
- Widows and Orphans — typeset distractions
- Rivers in text columns (vertically aligned groups of word space that can snake through columns of text from line to line and disrupt type “color”)
- Poor craftsmanship: uneven type “color”
- Illegibility

Too many hyphens
Metal type is set backwards-reading so it will impress the ink on paper in a right-reading manner. Digital type makes a typographer’s job easier.