

University of Chicago Crown Family School + Sandstorm®

# Breaking Free from PDFs: Creating Beautiful, Accessible HTML Alternatives

Digital Collegium Accessibility Summit

July 29, 2025



# Now for some quick intros...



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DEIB Specialist  
*Sandstorm Design*

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Chief Marketing Officer  
*University of Chicago*  
*Crown Family School of Social*  
*Work, Policy, and Practice*

she/her

# Fun facts about Sandstorm®

Accessibility-certified,  
creative technology  
agency for 25+ years  
for **purpose-driven  
brands**

Deep expertise with **Higher  
Ed, Associations, Global  
Non-Profits, &  
Healthcare**



## **Certifications:**

CPACC (accessibility), AWS  
Cloud, Pantheon, Acquia,  
Drupal, DEIB, and WBENC  
(women-owned)

Team leads with  
**decades of experience**

**Interdisciplinary team:**  
UX, UI, AI, strategy,  
technology, analytics

UX practice started by  
**Ph.D in human factors**  
in 2006

# Good Work for Good People

THE UNIVERSITY OF  
**CHICAGO**

 THE UNIVERSITY OF CHICAGO  
CROWN FAMILY SCHOOL OF  
SOCIAL WORK, POLICY, AND PRACTICE

 THE UNIVERSITY OF CHICAGO  
THE LAW SCHOOL

 THE UNIVERSITY OF  
**CHICAGO**  
DIVISION OF THE  
ARTS & HUMANITIES

 THE UNIVERSITY OF CHICAGO  
MARINE BIOLOGICAL  
LABORATORY

UCHICAGO  
**GRAD**  


 THE UNIVERSITY OF CHICAGO  
HARRIS SCHOOL  
OF PUBLIC POLICY

 THE UNIVERSITY OF  
**CHICAGO**  
MEDICINE &  
BIOLOGICAL  
SCIENCES

 UNIVERSITY OF  
**ILLINOIS CHICAGO**

 THE UNIVERSITY OF CHICAGO  
PRITZKER SCHOOL OF  
MOLECULAR ENGINEERING


  
THE  
UNIVERSITY  
OF UTAH

 UNIVERSITY OF  
**DENVER**

 THE UNIVERSITY OF CHICAGO  
INSTITUTE FOR THE STUDY  
OF ANCIENT CULTURES  
West Asia & North Africa

**CHICAGO**  
The University of Chicago Press

 NATIONAL  
LOUIS  
UNIVERSITY

 The NEW ENGLAND  
JOURNAL of MEDICINE





# About THE UNIVERSITY OF CHICAGO

- Private research university, **founded 1890**
- Known for **rigorous academics** and commitment to **intellectual freedom**
- Laid groundwork for **breakthroughs across many disciplines**







# About Crown Family School

**Advancing  
a More Just  
and  
Humane  
Society**

- One of the **oldest** and **most highly regarded graduate schools** of social work
- Educates students to handle **society's most difficult problems**
- Combines **rigorous research** and **hands-on practice** to achieve a better quality of life





# Crown Family School's Edith Abbott Hall



THE UNIVERSITY OF CHICAGO

CROWN FAMILY SCHOOL OF  
SOCIAL WORK, POLICY, AND PRACTICE



# Today we'll cover...

- Why PDFs can be **so problematic**
- Our process to get Crown Family School's curriculum maps **out of PDFs**
- How we achieved success by **baking accessibility in from the beginning**



## QUESTION

# Why are PDFs bad for accessibility?



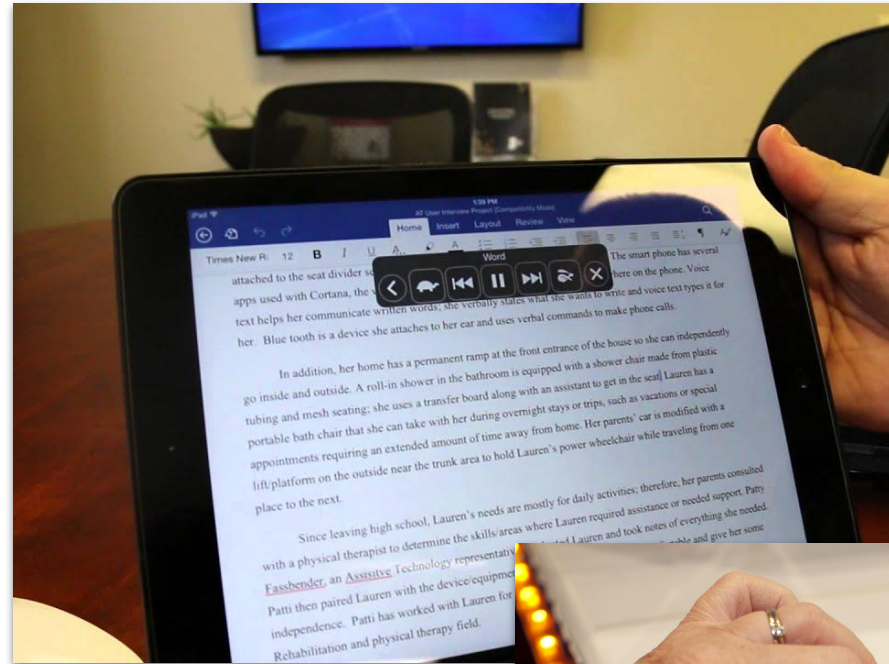
# 1/ Lack of necessary structure & format

- Semantic information **is lacking**
- **Unique fonts** are difficult to understand
- **Complicated layouts** have no logical reading order
- **No text resizing**



## 2/ Incompatibility with assistive technology

Without the appropriate markup, assistive technology **cannot work** with your PDFs.



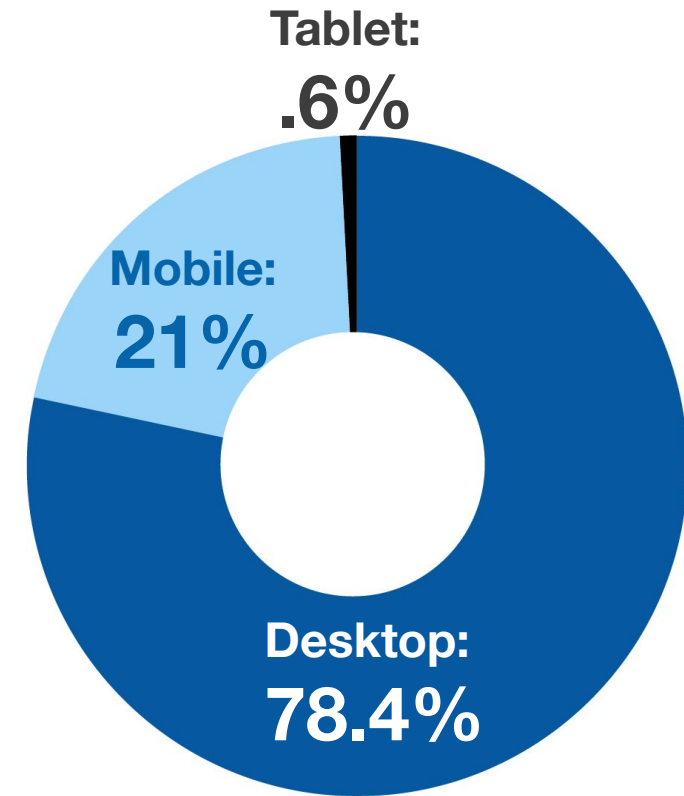
**Left:** Screen reader  
**Below:** Braille display



### 3/ Lack of mobile responsiveness

PDFs are typically made with **standard page layouts** in mind (e.g. 8.5'' x 11'').

This inherently **lacks mobile responsiveness** due to the size of mobile viewports.



**Crown Family School's Traffic by Device**  
Jan 1 through May 31, 2025



## 4/ Limited reach

It's harder for friendly robots to scrape the content in a PDF—which means you are getting **no SEO benefit** from it.

# So let's just fix the PDFs!

**If only it were  
so easy...**

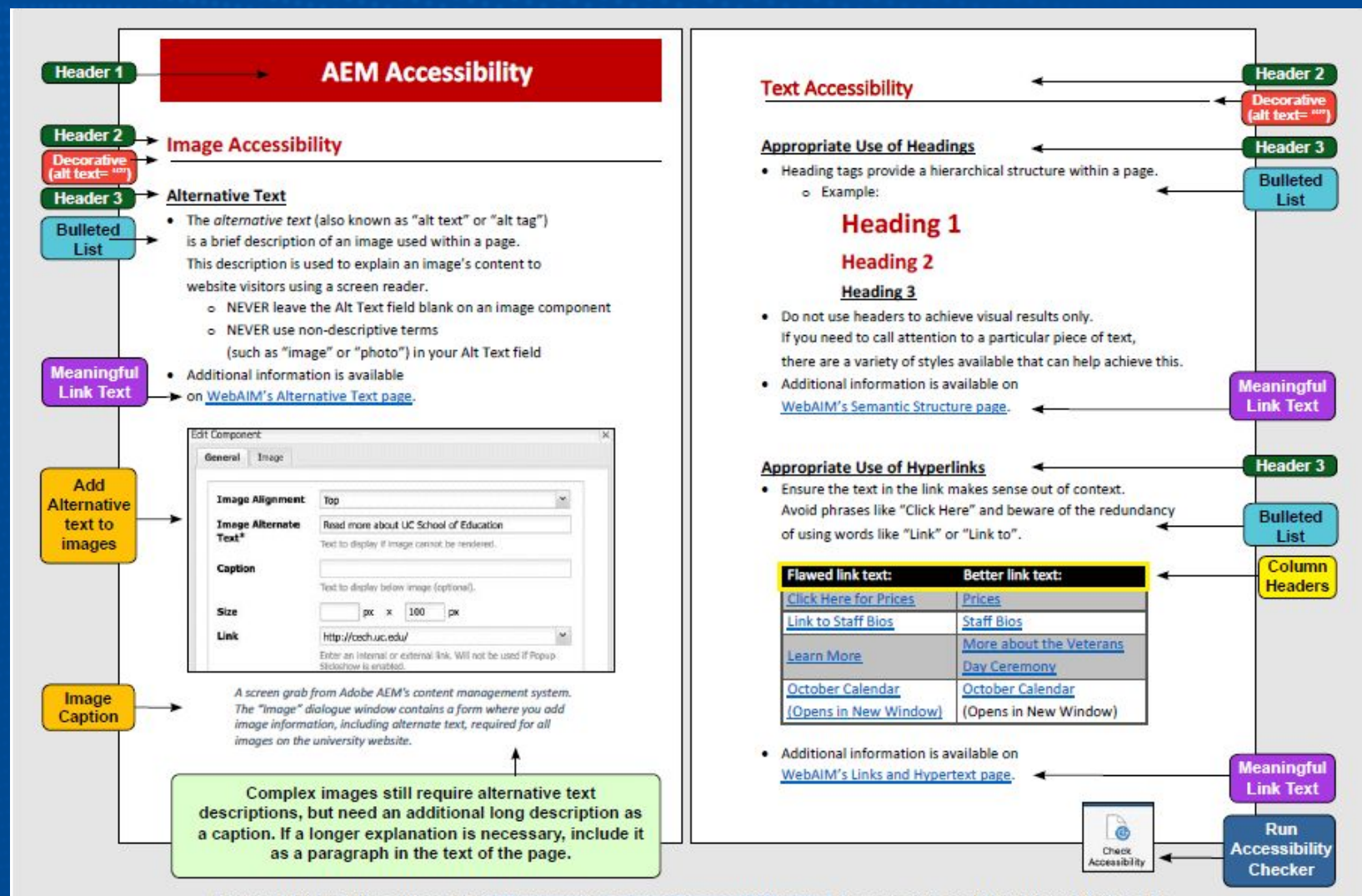
- Great in spirit; **hard in practice**
- Requires a **manual effort**
- Reach is still **not as good** as HTML pages
- Experience of **linking to the site from a PDF and back** is not good



# Example of PDF remediation

This needs to be done for **every single PDF**, every single time they are updated.

Source: [CodeMantra](#)





**BACKGROUND**

# The Project Overview



THE UNIVERSITY OF CHICAGO  
CROWN FAMILY SCHOOL OF  
SOCIAL WORK, POLICY, AND PRACTICE

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THE CROWN FAMILY SCHOOL + SANDSTORM PARTNERSHIP

Crown Family School is among the **top graduate schools for social work** in the world. They partnered with Sandstorm to **redesign and rebuild their website**, moving them to Drupal 10.



THE UNIVERSITY OF CHICAGO  
CROWN FAMILY SCHOOL OF  
SOCIAL WORK, POLICY, AND PRACTICE

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Accessibility was a goal  
**from the beginning.**

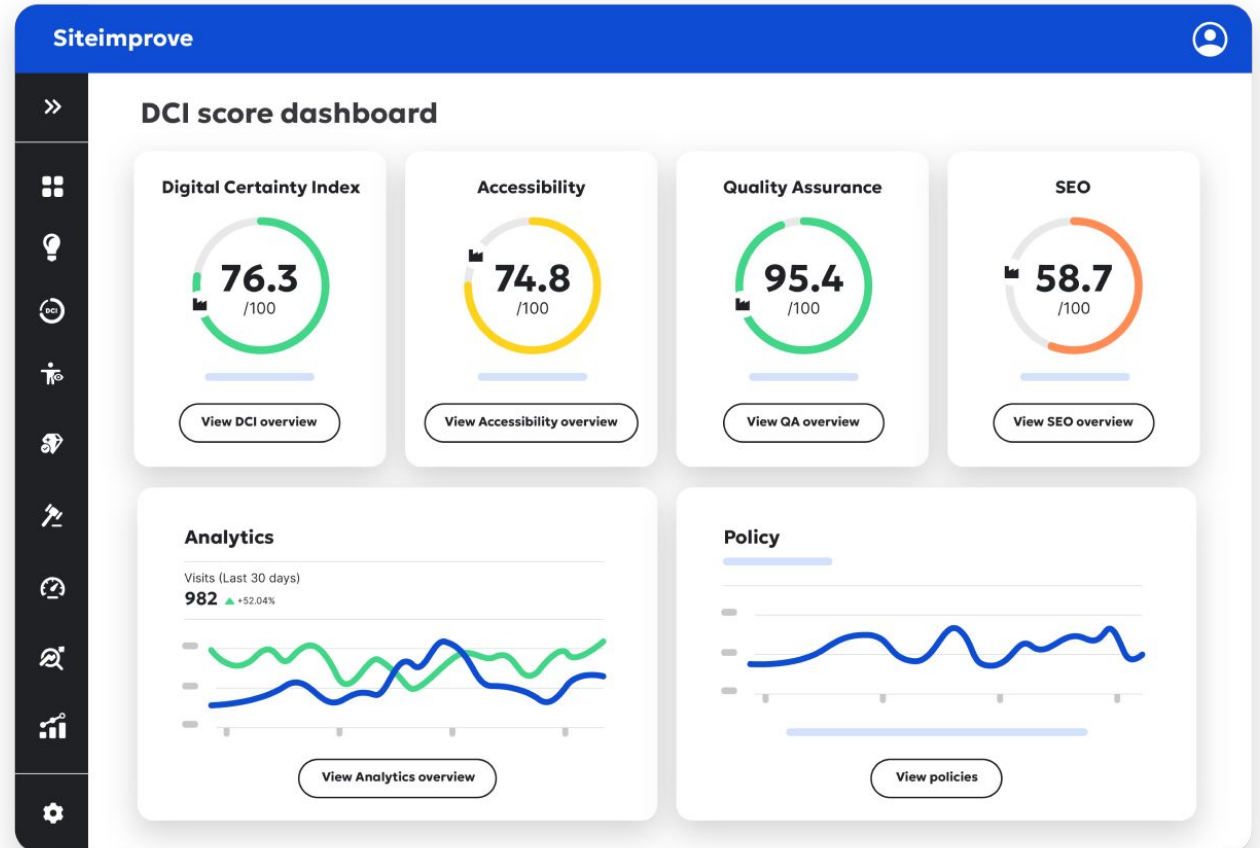




# Accessibility Tool

**SiteImprove:** A tool UChicago leverages across schools. It tracks accessibility among many other tools.

Our AA accessibility score pre-launch: **83/100**



# Research Findings (1 of 2)

Incoming students want to know as much as they can about **what their life will be like at Crown Family School.**



# Research Findings (2 of 2)

They want to be able to:

- ✓ View the university's **academic calendar**
- ✓ **Plan out their degree**
- ✓ Connect with other students
- ✓ Identify funding opportunities (especially stipends and financial aid)
- ✓ Find what field sites are available to them
- ✓ Access the student handbook
- ✓ Read student and alumni testimonials
- ✓ Know **who is teaching their classes** and how they will be graded

We asked  
stakeholders:

What is **the most important thing to improve** upon with the current website experience?

4 said to **create interactive curriculum maps**



“

“[Currently, information is] not presented in a way that students understand what classes they’re required to take and what the content of those classes are. **If there could be a dynamic course map, that would solve all those questions.**”

- *Stakeholder*





## THE APPROACH

# How we brought the new curriculum maps to life





# Primary Goals

**1/**

Improve  
accessibility  
wherever  
possible

**2/**

Widen the reach  
of content in  
PDFs

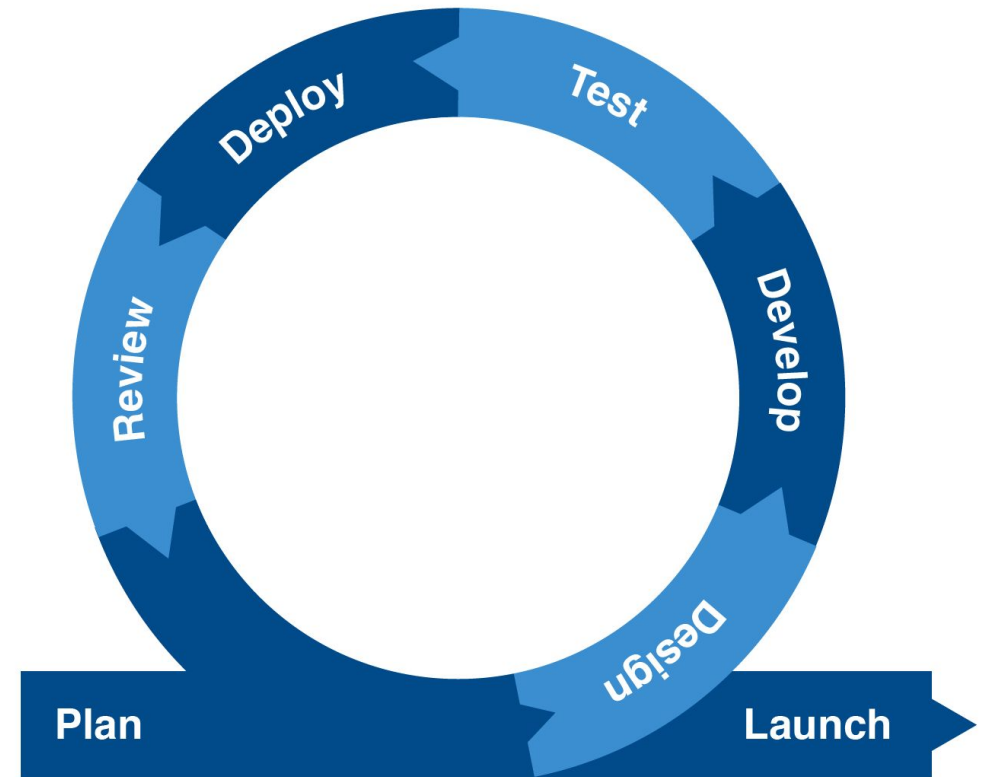
**3/**

Show students a  
clear path at  
Crown Family  
School



# Agile Methodology

This is a project management approach that emphasizes **iterative development, flexibility, and collaboration.**





# Our Wireframe

## SW MASTER'S CURRICULUM MAP

### SOCIAL ADMINISTRATION with CLINICAL COURSE RECOMMENDATIONS

Core Class			Social Administration Concentration			Elective	Field	Clinical Course Recommendation
YEAR 1			YEAR 2					
AUTUMN	WINTER	SPRING	AUTUMN	WINTER	SPRING			
Social Intervention: Direct Practice (30100)	Social Intervention: Direct Practice (30100)	Organizational Theory and Analysis for Human Services (46712)	Data for Policy Analysis and Management (48500) Advanced Options	Practice Method (b)** OR Psychopathology	Practice Method (b)** OR Intervention Course			
Social Intervention: Programs & Policies (30000)	Social Intervention: Programs & Policies (30000)	Economics for Social Welfare (45400)	Specialized Diversity Course	Political Processes in Policy Formulation and Implementation (46800)	Foundational Trauma Course (if not already taken) OR A hybrid Clinical/Admin course in topical area of interest			
Foundational Diversity Course	Human Behavior in the Social Environment OR Social Intervention: Research & Evaluation (30200) Advanced Options* (445xx), (48500)	Human Behavior in the Social Environment OR Social Intervention: Research & Evaluation (30200) Advanced Options* (445xx), (48500)	Practice Method (a)**	Elective ***	Elective***			
Field Practicum (480 Hours) Field Seminar with Field Consultant			Field Practicum (496 Hours) Field Case Seminar with Field Consultant					

\* If a student takes 48500 as an advanced option in year 1 (Core) and then decides to take the clinical practice concentration, the student must take 445xx in year 2.

\*\* Recommend a minimum of three Clinical courses; four is strongly encouraged.

\*\*\* When choosing electives, some students choose to apply to and complete a Program of Study.

[crownschool.uchicago.edu/masters-program-sw](https://crownschool.uchicago.edu/masters-program-sw)

# 1/ CHALLENGE

## Relying on color





	Text	#FFFFFF	#800000	#737373	#A6A6A6	#D9D9D9	#A9431E	#DE7C00	#ECA154	#643335	#A4343A	#B46A55	#13301C	#789D4A	#A9C47F	#284734	#275D38	#9CAF88	#002A3A	#007396	#3EB1C8	#41273B	#59315F	#86647A	#CC8A00	#EAAA00	#F3D03E
Background																											
White #FFFFFF	Text	AAA 10	AA 4.7	DNP 2.4	DNP 1.4	AA 5.9	AA18 3	DNP 2.1	AAA 10	AA 6.7	AA18 4	AAA 14.3	AA18 3.1	DNP 1.9	AAA 10	AAA 7.7	DNP 2.3	AAA 15	AA 5.3	DNP 2.5	AAA 13.3	AAA 10	AA 5.1	DNP 2.9	DNP 2	DNP 1.5	
Phoenix Marroon #800000	Text	AAA 10		DNP 2.3	AA 4.5	AAA 7.7	DNP 1.8	AA18 3.6	AA 5.1	DNP 1	DNP 1.6	DNP 2.6	DNP 1.3	AA18 3.5	AA 5.6	DNP 1	DNP 1.4	AA 4.6	DNP 1.3	DNP 2	AA18 4.3	DNP 1.2	DNP 1	DNP 2.1	AA18 3.7	AA 5.3	AAA 7.2
Dk Greystone #737373	Text	AA 4.7	DNP 2.3		DNP 1.9	AA18 3.3	DNP 1.2	DNP 1.5	DNP 2.2	DNP 2.1	DNP 1.4	DNP 1.1	AA18 3	DNP 1.5	DNP 2.4	DNP 2.1	DNP 1.6	DNP 2	AA18 3.1	DNP 1.1	DNP 1.8	DNP 2.8	DNP 2.1	DNP 1	DNP 1.6	DNP 2.3	AA18 3.1
Greystone #A6A6A6	Text	DNP 2.4	AA 4.5	DNP 1.9		DNP 1.7	DNP 2.4	DNP 1.2	DNP 1.1	AA18 4.1	DNP 2.7	DNP 1.6	AA 5.8	DNP 1.2	DNP 1.2	AA18 4.2	AA18 3.1	DNP 1	AA 6.2	DNP 2.2	DNP 1	AA 5.4	AA18 4.2	DNP 2.1	DNP 1.2	DNP 1.1	DNP 1.6
Lt Greystone #D9D9D9	Text	DNP 1.4	AAA 7.7	AA18 3.3	DNP 1.7		AA18 4.2	DNP 2.1	DNP 1.5	AAA 7.2	AA 4.7	DNP 2.9	AAA 10	DNP 2.2	DNP 1.3	AAA 7.2	AA 5.4	DNP 1.6	AAA 10	AA18 3.8	DNP 1.7	AAA 9.4	AAA 7.3	AA18 3.6	DNP 2	DNP 1.4	DNP 1
Dk Terracotta #A9431E	Text	AA 5.9	DNP 1.8	DNP 1.2	DNP 2.4	AA18 4.2		DNP 1.9	DNP 2.7	DNP 1.7	DNP 1.1	DNP 1.4	DNP 2.3	DNP 1.9	AA18 3.1	DNP 1.7	DNP 1.3	DNP 2.5	DNP 2.5	DNP 1.1	DNP 2.3	DNP 2.2	DNP 1.7	DNP 1.1	DNP 2	DNP 2.9	AA18 3.9
Terracotta #DE7C00	Text	AA18 3	AA18 3.6	DNP 1.5	DNP 1.2	DNP 2.1	DNP 1.9		DNP 1.4	AA18 3.3	DNP 2.2	DNP 1.3	AA 4.7	DNP 1	DNP 1.5	AA18 3.4	DNP 2.5	DNP 1.2	AA 5	DNP 1.8	DNP 1.1	AA18 4.4	AA18 3.4	DNP 1.7	DNP 1	DNP 1.4	DNP 1.9
Lt Terracotta #ECA154	Text	DNP 2.1	AA 5.1	DNP 2.2	DNP 1.1	DNP 1.5	DNP 2.7	DNP 1.4		AA 4.7	AA18 3.1	DNP 1.9	AA 6.6	DNP 1.4	DNP 1.1	AA 4.8	AA18 3.6	DNP 1.1	AAA 7	DNP 2.5	DNP 1.1	AA 6.2	AA 4.8	DNP 2.3	DNP 1.3	DNP 1	DNP 1.4
Dk Brick #643335	Text	AAA 10	DNP 1	DNP 2.1	AA18 4.1	AAA 7.2	DNP 1.7	AA18 3.3	AA 4.7		DNP 1.5	DNP 2.4	DNP 1.4	AA18 3.2	AA 5.2	DNP 1	DNP 1.3	AA18 4.3	DNP 1.4	DNP 1.8	AA18 4	DNP 1.3	DNP 1	DNP 1.9	AA18 3.4	AA 4.9	AA 6.7
Brick #A4343A	Text	AA 6.7	DNP 1.6	DNP 1.4	DNP 2.7	AA 4.7	DNP 1.1	DNP 2.2	AA18 3.1	DNP 1.5		DNP 1.6	DNP 2.1	DNP 2.1	AA18 3.4	DNP 1.5	DNP 1.1	DNP 2.8	DNP 2.2	DNP 1.2	DNP 2.6	DNP 1.9	DNP 1.5	DNP 1.3	DNP 2.3	AA18 3.2	AA18 4.4
Lt Brick #B46A55	Text	AA18 4	DNP 2.6	DNP 1.1	DNP 1.6	DNP 2.9	DNP 1.4	DNP 1.3	DNP 1.9	DNP 2.4	DNP 1.6		AA18 3.5	DNP 1.3	DNP 2.1	DNP 2.5	DNP 1.8	DNP 1.7	AA18 3.6	DNP 1.3	DNP 1.6	AA18 3.2	DNP 2.5	DNP 1.2	DNP 1.4	DNP 2	DNP 2.7
Dk Ivy #13301C	Text	AAA 14.3	DNP 1.3	AA18 3	AA 5.8	AAA 10	DNP 2.3	AA 4.7	AA 6.6	DNP 1.4	DNP 2.1	AA18 3.5		AA 4.5	AAA 7.4	DNP 1.3	DNP 1.8	AA 6	DNP 1	DNP 2.6	AA 5.6	DNP 1	DNP 1.3	DNP 2.8	AA 4.9	AA 6.9	AAA 9.4
Ivy #789D4A	Text	AA18 3.1	AA18 3.5	DNP 1.5	DNP 1.2	DNP 2.2	DNP 1.9	DNP 1	DNP 1.4	AA18 3.2	DNP 2.1	DNP 1.3	AA 4.5		DNP 1.6	AA18 3.2	DNP 2.4	DNP 1.3	AA 4.8	DNP 1.7	DNP 1.2	AA18 4.2	AA18 3.3	DNP 1.6	DNP 1	DNP 1.5	DNP 2
Lt Ivy #A9C47F	Text	DNP 1.9	AA 5.6	DNP 2.4	DNP 1.2	DNP 1.3	AA18 3.1	DNP 1.5	DNP 1.1	AA 5.2	AA18 3.4	DNP 2.1	AAA 7.4	DNP 1.6		AA 5.3	AA18 4	DNP 1.2	AAA 7.8	DNP 2.8	DNP 1.3	AA 6.9	AA 5.3	DNP 2.6	DNP 1.5	DNP 1	DNP 1.2
Dk Forest #284734	Text	AAA 10	DNP 1	DNP 2.1	AA18 4.2	AAA 7.2	DNP 1.7	AA18 3.4	AA 4.8	DNP 1	DNP 1.5	DNP 2.5	DNP 1.3	AA18 3.2	AA 5.3		DNP 1.3	AA18 4.3	DNP 1.4	DNP 1.9	AA18 4	DNP 1.2	DNP 1	DNP 2	AA18 3.5	AA 5	AA 6.8

# Our solution

Year 1		
Autumn	Winter	Spring
<div><div></div> CORE</div> <div><u>[1/2] Social Intervention: Direct Practice (30100)</u></div>	<div><div></div> CORE</div> <div><u>[2/2] Social Intervention: Direct Practice (30100)</u></div>	<div><div></div> SOCIAL ADMINISTRATION</div> <div><u>Organizational Theory and Analysis for Human Services (46712)</u></div>

We added a colorful background **as well as a dot** and **corresponding text label** to establish the legend.



2/

CHALLENGE

Make it flexible...  
...but not **too** flexible



# The power of structured fields

**ACADEMIC YEAR(S) \***

Collapse all

Academic year **4**

Collapse

Year title \*

Year 1

Column layout \*

Three columns

**SEMESTERS \***

Collapse all

Semester **3**

Collapse

Semester \*

Autumn

Year long \*

No

If yes this column will span the full width of the academic year

**COURSES \***

Collapse all

Course

Collapse

Concentration \*

Core (499)

Course color \*

Gold

Designates background color for the course card

Course links \*

**B** **I** **U** **S**  $x^2$   $x_2$   $I_x$   $\frac{\square}{\square}$  Source

Format Styles

[\[1/2\] Social Intervention: Direct Practice \(30100\)](#)



# 3/ CHALLENGE Print it!



One good  
thing about  
PDFs:

They're easy  
to print.






# Our Solution

Prioritize  
something  
called  
“Print CSS”

8/17/25, 6:55 PM

SW Full-time Master's Curriculum Map: Clinical Practice | Crown Family School of Social Work, Policy, and Practice



THE UNIVERSITY OF CHICAGO

CROWN FAMILY SCHOOL OF  
SOCIAL WORK, POLICY, AND PRACTICE

Advancing a More Just and Humane Society

SW Full-time Master's Curriculum Map:  
Clinical Practice

Year 1

Autumn	Winter	Spring
<ul style="list-style-type: none"><li>CORE [1/21] Social Intervention: Direct Practice (30100)</li></ul>	<ul style="list-style-type: none"><li>CORE [2/21] Social Intervention: Direct Practice (30100)</li></ul>	<ul style="list-style-type: none"><li>CLINICAL Practice Method (a)**</li></ul>
<ul style="list-style-type: none"><li>CORE [1/21] Social Intervention: Programs &amp; Policies (30000)</li></ul>	<ul style="list-style-type: none"><li>CORE [2/21] Social Intervention: Programs &amp; Policies (30000) (C)</li></ul>	<ul style="list-style-type: none"><li>ELECTIVE Elective** Integrative DSM-V Assessment (46722) Strongly Recommended</li></ul>
<ul style="list-style-type: none"><li>CORE Foundational Diversity Course</li></ul>	<ul style="list-style-type: none"><li>CORE Human Behavior in the Social Environment (32200)</li></ul>	<ul style="list-style-type: none"><li>CORE Social Intervention: Research &amp; Evaluation (30200) Advanced Options* (44501) (46500) (C)</li></ul>

Year Long

- FIELD  
Field Practicum (480 Hours) Field Seminar with Field Consultant

\* If a student takes 44501 as an advanced option in year 1 (Core) and then decides to take the social administration concentration, the student must take 48500 in year 2.

\*\* Students choose one 2-quarter course sequence in one practice method and one course, for one quarter, in a different practice method. Practice methods offered: Psychodynamic, Cognitive-Behavioral, Family Systems

\*\*\* When choosing electives, 40% of our students choose to apply to and complete a Program of Study.

<https://curriculum.chicagosome.edu/academic/programs/master-social-work/sw-full-time-master-curriculum-map-clinical-practice>

35

Print

3 pages

Destination

Save as PDF

Pages

All

Pages per sheet

1

Margins

Default

Options

☒ Headers and footers

☐ Background graphics

Print using system dialog... (⌘P)

Open PDF in Preview

Cancel

Save

## SW Full-time Master's Curriculum Map: Clinical Practice

### Year 1

#### Autumn

● CORE

[\[1/2\] Social Intervention: Direct Practice \(30100\)](#)

● CORE

[\[1/2\] Social Intervention: Programs & Policies \(30000\)](#)

● CORE

Foundational Diversity Course

#### Winter

● CORE

[\[2/2\] Social Intervention: Direct Practice \(30100\)](#)

● CORE

[\[2/2\] Social Intervention: Programs & Policies \(30000\)](#) ↗

● CORE

[Human Behavior in the Social Environment](#) ↗(32700)

#### Spring

● CLINICAL

Practice Method (a)\*\*

● ELECTIVE

Elective\*\*\* [Integrative DSM-V Assessment \(46722\)](#) Strongly Recommended

● CORE

[Social Intervention: Research & Evaluation \(30200\) Advanced Options\\*](#) (44501), (48500) ↗

### Year Long

● FIELD

Field Practicum (480 Hours) Field Seminar with Field Consultant

# Curriculum Maps Today

[See them live](#)↗





# SiteImprove, post-project

Our AA accessibility  
score today:

**98/100**

## Accessibility overview

Site target:

A AA

Progress towards site target ?





## TAKEAWAY

Your accessibility efforts  
are NOT “one and done”  
projects





# Additional Takeaways

- **Evaluate your PDFs.** Which ones do you need to keep? Which could be flipped into HTML pages?
- **Track your progress.** How are you moving the needle to improve accessibility on your site overall?
- **Listen to users.** The things they need to succeed on your website may align with the accessibility improvements you want to make, which means these efforts have good ROI.
- **Keep going.** Remember accessibility is a journey and not a destination. Changing your mindset will make the process easier.

# Access the Presentation

<https://www.sandstormdesign.com/dca11y>

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