



SEARCH ENGINE OPTIMIZATION



University of Wisconsin-Eau Claire

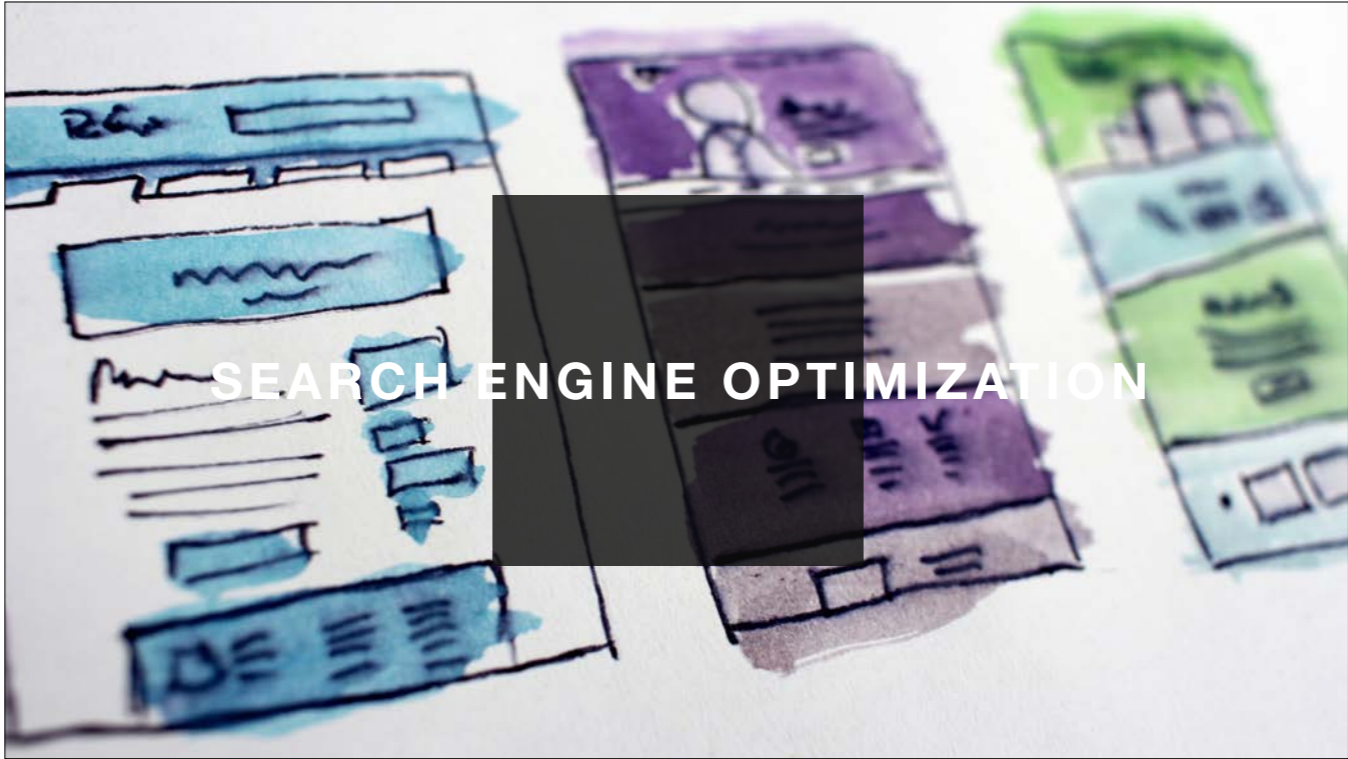
Search Engine Optimization for the Technologically Inclined

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Overview

1. Search Engine Optimization
2. Security
3. Accessibility
4. Mobile First
5. URLs & Redirects
6. Stuff for Robots
7. Structured Data
8. Odds & Ends



SEARCH ENGINE OPTIMIZATION

Search Engine Optimization



Resources:

- <https://moz.com/beginners-guide-to-seo>
- <https://moz.com/blog/modern-seo-requires-technical-creative-and-strategic-thinking-whiteboard-friday>
- <https://support.google.com/webmasters/answer/35769?hl=en>
- <https://moz.com/blog/seo-cheat-sheet>
- <https://moz.com/google-algorithm-change>
- <https://webmasters.googleblog.com>



HTTPS, always

- Starting July 2018, Chrome will identify non-https sites as “not secure”
- Ranking boost for HTTPS sites
- If you haven’t made the switch, make a plan now
- Be cautious since switching to HTTPS can have negative impact if not done properly
- Avoid mixed content

Resources:

- <https://security.googleblog.com/2018/02/a-secure-web-is-here-to-stay.html>
- <https://developers.google.com/web/fundamentals/security/encrypt-in-transit/why-https>
- <https://searchengineland.com/effective-july-2018-googles-chrome-browser-will-mark-non-https-sites-as-not-secure-291623>
- <https://searchengineland.com/http-https-seos-guide-securing-website-246940>

SSL: Certificate Trust

- Symantec certificate authority was distrusted starting March 2018
- Affected certs include Thawte, VeriSign, Equifax, GeoTrust, and RapidSSL
- April and October releases of stable Chrome will bring more visibility



Your connection is not private

Attackers might be trying to steal your information from unencrypted transmissions (for example, passwords, messages, or credit cards). [Learn more](#)
NET::ERR_CERT_SYMANTEC_LEGACY

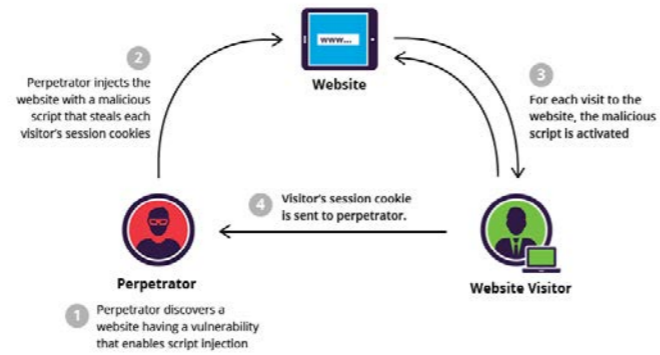
Automatically send some system information and page content to the site. This helps improve the site, but it might also give the site owner information about you. [Privacy policy](#)

ADVANCED

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Resources:

- <https://webmasters.googleblog.com/2018/04/distrust-of-symantec-pki-immediate.html>



Malware, XSS exploits, etc.

- Site security impacts SEO!
- Regularly scan for malware
- Properly cleanse user inputs (i.e. contact forms)
- Keep up with CMS and other security updates
- Lockdown scripts and limit iFrames

Resources:

- <https://moz.com/blog/how-to-make-your-website-more-secure>
- <https://www.incapsula.com/web-application-security/cross-site-scripting-xss-attacks.html>



Accessibility and SEO

- Making an accessible site is good for SEO! (Not to mention it's just the right thing to do.)
- Valid semantic markup benefits users AND bots
- The list is long: Video transcription, image captions and alt attributes, title and header tags, meaningful link anchor text, sitemaps, breadcrumbs, content hierarchy, hidden text (when executed properly), etc.

Accessibility Review

Accessibility Review (Guidelines: WCAG 2.0 (Level AAA))

Export Format: PDF | Report to Export: A1


Known Problems (2) | Likely Problems (2) | Potential Problems (371) | HTML Validation | CSS Validation

1.1 Text Alternatives: Provide text alternatives for all non-text content


Success Criteria 1.1.1 Non-text Content (A)

Check 8: [img element may require a long description.](#)


Line 174, Column 8:


Line 224, Column 3:


Line 230, Column 97:

Line 238, Column 106:

Line 246, Column 103:

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Resources:

- <https://moz.com/blog/accessibility-seo-1>
- <https://moz.com/blog/seo-accessibility-images-video>
- <https://moz.com/blog/seo-accessibility-formatting-and-links>
- <https://achecker.ca>



MOBILE FIRST

```
1 <!DOCTYPE html>
2 <html lang="en" dir="ltr">
3   <head>
4     <title>Admissions | University of Wisconsin-Eau Claire</title>
5     <meta charset="utf-8" />
6     <meta name="Generator" content="Drupal 8 (https://www.drupal.org)" />
7     <meta name="MobileOptimized" content="width" />
8     <meta name="HandheldFriendly" content="true" />
9     <meta name="viewport" content="width=device-width, initial-scale=1.0" />
10    <meta property="og:locale" content="en_US" />
11    <meta property="og:type" content="website" />
12    <meta property="og:title" content="Admissions" />
13    <meta property="og:url" content="https://www.uwec.edu/admissions/" />
14    <meta property="og:site_name" content="University of Wisconsin-Eau Claire" />
15    <meta property="og:image" content="https://cdn.uwec.edu/ethos/images/6542/445_StudyThread_2_homepage.jpg" />
```

Mobile First

- Mobile-first indexing on Google began March 2018
- Responsive sites preferred
- Avoid separate, pared-down mobile sites
- Rock-solid canonical URLs
- Verify your site fully renders for bots

Resources:

- <https://moz.com/blog/mobile-first-indexing-seo>
- <https://webmasters.googleblog.com/2016/11/mobile-first-indexing.html>
- <https://searchengineland.com/faq-google-mobile-first-index-262751>
- <https://webmasters.googleblog.com/2018/03/rolling-out-mobile-first-indexing.html>
- <https://developers.google.com/search/mobile-sites/mobile-first-indexing>

PageSpeed Tools > Insights

HOME GUIDES REFERENCE SUPPORT

PageSpeed Insights

https://www.uwec.edu/

Mobile Desktop

Speed
Fast
1.2s FCP 1.2s DCL

Optimization
Good
84 / 100

Data from the Chrome User Experience report indicates this page's median **FCP** (1.2s) and **DCL** (1.2s) ranks it in the top 10% of all pages. This page has a good level of optimization because few of its resources are render-blocking. [Learn more.](#)

Page Load Distributions

| Metric | Fast | Average | Slow |
|--------|------|---------|------|
| FCP | 71% | 22% | 7% |
| DCL | 63% | 13% | 24% |

The distribution of this page's FCP and DCL events, categorized as Fast (fastest third), Average (middle third), and Slow (bottom third)

Page Stats

PSI estimates this page requires 4 render-blocking round trips and ~124 resources (3.8MB) to load. The median round trips and ~75 resources (1MB) to load. Fewer round trips and bytes results in faster pages.

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Page speed

- Impact as a ranking signal amplified with mobile-first indexing
- Compress and minify
- Avoid render-blocking JS
- Caching, caching, caching!

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Resources:

- <https://moz.com/learn/seo/page-speed>
- <https://developers.google.com/speed/docs/insights/about>
- <https://webmasters.googleblog.com/2018/01/using-page-speed-in-mobile-search.html>
- <https://developers.google.com/speed/pagespeed/insights/>



URLS AND REDIRECTS

URL Structure

- Keep it simple and relevant (avoid overly-dynamic URLs)
- User-readable (lowercase, hyphens as separators, avoid special characters, etc.)
- Should reflect site's information architecture
- Keywords okay, but avoid stuffing

The screenshot displays a MOZ SEO Cheat Sheet with two browser examples. The top example shows an 'SEO-Friendly URL' for 'https://store.example.com/topic/subtopic/descriptive-'. The bottom example shows a 'Dynamic URL' for 'http://www.example.com/index.php?product=1234&sd'. Both examples include a legend for URL components: 1 Protocol, 2 Subdomain, 3 Domain, 4 Top-Level Domain (TLD), 5 Folders / Paths, 6 Page, 7 Named Anchor. The top example also includes a 'Keyword Priority' section listing: 1. Domain, 2. Subdomain, 3. Folder, 4. Path/Page. The bottom example includes a 'Popular TLDs' section listing: .com - commercial, .org - non-profit, .net - infrastructure, .edu - schools, .info - information, .co* - commercial, .biz - small business, .io* - technology. A page number '16' is visible in the bottom right corner of the screenshot.

Resources:

- <https://moz.com/learn/seo/url>
- <https://moz.com/blog/15-seo-best-practices-for-structuring-urls>


```
28 <link rel="apple-touch-icon" sizes="76x76" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-icon-7
29 <link rel="apple-touch-icon" sizes="72x72" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-icon-7
30 <link rel="apple-touch-icon" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-icon.png" />
31
32 <link rel="canonical" href="https://www.uwec.edu/admissions/" />
33 <link type="text/css" rel="stylesheet" media="all" href="/assets/www/styles.min.css?m=1523012755" />
34 <script src="//use.typekit.net/dch4gaq.js"></script>
35 <script>Typekit.load({async:true});</script>
36 </head>
37 <body>
38 <a href="#main-content" class="visually-hidden focusable">Skip to main content</a>
39
40 <div class="dialog-off-canvas-main-canvas" data-off-canvas-main-canvas>
41
42 <header id="site-header">
43 <!-- Search -->
```

Canonical URL

- Prevents duplicate content, ensuring the “correct” page gets indexed
- Every page, every time (except in non-production environments)
- Don’t rely solely on 301 redirects
- Protocol-specific
- Subdomain-specific

Resources:

- <https://moz.com/learn/seo/canonicalization>
- <https://moz.com/blog/canonical-url-tag-the-most-important-advancement-in-seo-practices-since-sitemaps>
- <https://moz.com/blog/cross-domain-rel-canonical-seo-value-cross-posted-content>



The infographic is a vertical stack of six blue rectangular boxes, each representing an HTTP status code. Each box contains the status code number in large white font, a small icon or diagram, the name of the status code, and a brief description. The status codes shown are 200 (OK/Success), 301 (Permanent), 302 (Temporary), 404 (Not Found), 500 (Server Error), and 503 (Unavailable). The icons use stick figures and letters to illustrate the concept of each status code.

| Status Code | Name | Description |
|-------------|--------------|---|
| 200 | OK/Success | Everyone arrives at Page A. There is much rejoicing! |
| 301 | Permanent* | Everyone is redirected to the new location, Page B. |
| 302 | Temporary* | Visitors and bots are redirected. Juice is left behind. |
| 404 | Not Found | Original page is gone. Visitors may see a 404 page. |
| 500 | Server Error | No page is returned. Everyone is lost and confused :(|
| 503 | Unavailable | Asks everyone to come back later. A 404 alternative. |

Redirects and HTTP Status Codes

- Leverage redirects to normalize URLs and clean up crawl issues (www vs no www, trailing slash, etc.)
- 301 redirect to HTTPS
- 301s pass all PageRank (aka "link juice")
- Use vanity URLs to prevent cannibalization
- Use in combination with canonical URLs
- 503 for maintenance

Resources:

- <https://moz.com/blog/an-seos-guide-to-http-status-codes>
- <https://moz.com/blog/301-redirect-rules-for-seo>
- <https://moz.com/blog/vanity-urls-and-avoiding-self-cannibalization>



STUFF FOR ROBOTS

```
26 <link rel="shortcut icon" href="https://cdn.uwec.edu/uwec16/img/favicon/favicon.ico" type="image/x-icon"
27 <link rel="apple-touch-icon" sizes="152x152" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-i
28 <link rel="apple-touch-icon" sizes="144x144" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-i
29 <link rel="apple-touch-icon" sizes="120x120" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-i
30 <link rel="apple-touch-icon" sizes="114x114" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-i
31 <link rel="apple-touch-icon" sizes="76x76" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-icc
32 <link rel="apple-touch-icon" sizes="72x72" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-icc
33 <link rel="apple-touch-icon" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-icon.png" />
34
35 <meta name="robots" content="noindex"/>
36 <link type="text/css" rel="stylesheet" media="all" href="/assets/www/styles.min.css?m=1522963758" />
37 <script src="//use.typekit.net/dch4gaq.js"></script>
38 <script>Typekit.load({async:true});</script>
39 </head>
```

Meta Robots Directives

- Use “noindex, nofollow” in non-production environments
 - Don’t use canonical URL in these environments (or if you do, be VERY careful!)
- Use in conjunction with robots.txt
- Can set directives for specific bots (but not all respect them)

Resources:

- <http://www.robotstxt.org/meta.html>
- <http://noarchive.net/meta/>
- <http://noarchive.net/xrobots/>

Robots.txt

- Use to fix crawl errors and avoid unwanted assets being indexed
- Should always be located at subdomain.yourdomain/robots.txt
- Separate subdomains = separate sitemaps
- Always verify after modifying

```
1 #
2 # robots.txt
3 #
4 # This file is to prevent the crawling and indexing of certain
5 # of your site by web crawlers and spiders run by sites like Ya
6 # and Google. By telling these "robots" where not to go on your
7 # you save bandwidth and server resources.
8 #
9 # This file will be ignored unless it is at the root of your ho
10 # Used: http://example.com/robots.txt
11 # Ignored: http://example.com/site/robots.txt
12 #
13 # For more information about the robots.txt standard, see:
14 # http://www.robotstxt.org/robotstxt.html
15
16 User-agent: *
17 # Directories
18 Disallow: /core/
19 # Files
20 Disallow: /README.txt
21 Disallow: /web.config
22 # Paths (clean URLs)
23 Disallow: /admin/
24 Disallow: /comment/reply/
25 Disallow: /filter/tips/
26 Disallow: /node/add/
27 Disallow: /search/
28 Disallow: /user/register/
29 Disallow: /user/password/
30 Disallow: /user/login/
31 Disallow: /user/logout/
32 # Paths (no clean URLs)
33 Disallow: /index.php/admin/
34 Disallow: /index.php/comment/reply/
35 Disallow: /index.php/filter/tips/
36 Disallow: /index.php/node/add/
37 Disallow: /index.php/search/
```

Resources:

- <http://www.robotstxt.org/robotstxt.html>
- https://support.google.com/webmasters/answer/6062608?hl=en&ref_topic=6061961
- <https://support.google.com/webmasters/answer/6062598?hl=en>

```

<urlset xmlns="http://www.sitemaps.org/schemas/sitemap/0.9" xmlns:image="http://www.google.com/schemas/
  <url>
  <loc>https://www.uwec.edu/</loc>
  <lastmod>2018-04-13T16:46:56-05:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/campus-life/</loc>
  <lastmod>2018-03-19T12:28:05-05:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/academics/college-arts-sciences/departments-programs/sociology/
  </loc>
  <lastmod>2018-04-04T18:47:44-05:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/about/</loc>
  <lastmod>2018-03-23T18:21:08-05:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/about/accreditation/</loc>
  <lastmod>2018-02-13T18:49:26-06:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/about/campus-history/</loc>
  <lastmod>2018-02-13T18:49:51-06:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/about/chancellors-office/</loc>
  <lastmod>2018-03-21T19:46:07-05:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/about/maps-directions/</loc>
  <lastmod>2018-04-02T17:01:17-05:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/about/contact-us/</loc>
  <lastmod>2018-03-27T17:15:45-05:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/academics/</loc>
  <lastmod>2017-11-29T15:15:45-06:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/academics/university-honors-program/
  </loc>
  <lastmod>2018-04-06T19:23:23-05:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/academics/majors-minors/</loc>
  <lastmod>2018-03-27T19:13:33-05:00</lastmod>
  </url>
  <url>
  <loc>https://www.uwec.edu/academics/academic-support/</loc>
  <lastmod>2018-03-13T16:13:23-05:00</lastmod>

```

XML Sitemaps

- Help search engines find all your content
- Follow proper format (and validate it!)
- 50,000 URL limit per sitemap
- If using more than one, include a sitemap_index.xml at the root directory
- Separate subdomains = separate sitemaps

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Resources:

- <https://www.sitemaps.org/protocol.html>
- <https://moz.com/blog/xml-sitemaps>
- <https://support.google.com/webmasters/answer/156184?hl=en>

```
10 <meta property="og:locale" content="en_US" />
11 <meta property="og:type" content="website" />
12 <meta property="og:title" content="Admissions" />
13 <meta property="og:url" content="https://www.uwec.edu/admissions/" />
14 <meta property="og:site_name" content="University of Wisconsin-Eau Claire" />
15 <meta property="og:image" content="https://cdn.uwec.edu/athena/images/6543/LAS_StudyAbroad-2-homepage.jpg" />
16 <meta property="twitter:card" content="summary" />
17 <meta property="twitter:site" content="@uweauclaire" />
18 <meta property="twitter:title" content="Admissions" />
19 <meta property="twitter:creator" content="@uweauclaire" />
20 <meta property="twitter:image:src" content="https://cdn.uwec.edu/athena/images/6543/LAS_StudyAbroad-2-homepage.jpg" />
21
22 <!-- Favicons -->
23 <link rel="shortcut icon" href="https://cdn.uwec.edu/uwec16/img/favicon/favicon.ico" type="image/x-icon" />
24 <link rel="apple-touch-icon" sizes="152x152" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-icon.png" />
25 <link rel="apple-touch-icon" sizes="144x144" href="https://cdn.uwec.edu/uwec16/img/favicon/apple-touch-icon.png" />
```

Metadata

- Use social metadata when appropriate
- Schema.org
- Helps search engines more easily understand your content
- Improves likelihood of inclusion in search features (aka featured snippets) on SERPs
- Be sure to validate!

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Resources:

- <https://moz.com/blog/meta-data-templates-123>
- <https://blog.kissmetrics.com/open-graph-meta-tags/>
- <https://developer.twitter.com/en/docs/tweets/optimize-with-cards/guides/getting-started>
- <http://ogp.me>



STRUCTURED DATA

UW-Eau Claire | University of Wisconsin-Eau Claire

<https://www.uwec.edu/>

UW-Eau Claire is routinely ranked a top 5 regional public university, and is nationally rated at the top in undergraduate research as well.

Results from uwec.edu

D2L

Desire2Learn (D2L) is an innovative learning ...

University of Wisconsin-Eau ...

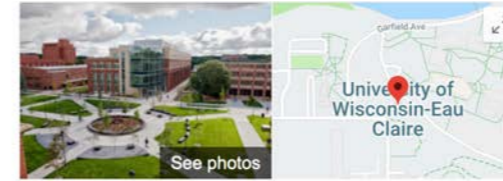
University of Wisconsin-Eau Claire's source for official information.

News + Events

Ask A Scientist. 7:00 p.m. | Acoustic Café. Wednesday ...

Athletics

Anyone showing up at an athletics home event with their current ...



University of Wisconsin-Eau Claire

Website Directions Save

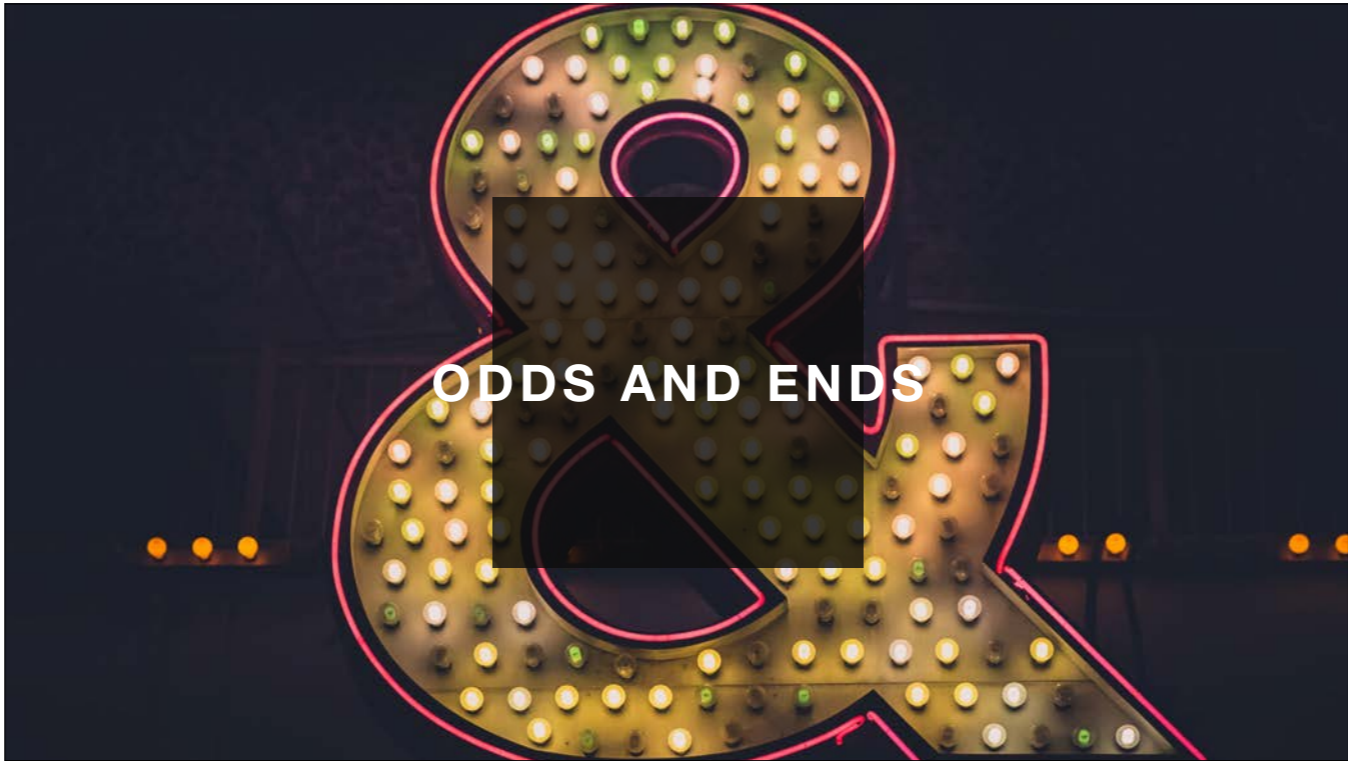
University in Eau Claire, Wisconsin

Structured Data

- Fancy term for well-organized data
- Enhances likelihood of being displayed on SERPs:
 - Rich Cards
 - Knowledge Graph
 - Breadcrumbs
 - Image Carousels

Resources:

- <https://builtvisible.com/micro-data-schema-org-guide-generating-rich-snippets/>
- <https://moz.com/blog/structured-data-for-seo-1>
- <https://moz.com/blog/structured-data-for-seo-2>
- <http://schema.org>



| | | | |
|---------------------|----------------------------------|-----------------------|--------------------------|
| Error 136 | Valid with warnings 17 | Valid 21.6K | Excluded 57.4K |
|---------------------|----------------------------------|-----------------------|--------------------------|

Impressions

| Status | Reason | Validation ↑ | Trend |
|--------|-------------------------------------|--------------|-------|
| Error | Submitted URL not found (404) | Failed | — |
| Error | Submitted URL marked 'noindex' | Not Started | — |
| Error | Submitted URL blocked by robots.txt | Started | — |
| Error | Submitted URL has crawl issue | Started | — |

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Crawl Errors

- Actively monitor for crawl errors (and fix them!)
- Monitor both HTTP and HTTPS if applicable
- Prioritize your efforts
- Useful tools:
 - Google Search Console (formerly Google Webmaster Tools)
 - Moz Pro

Resources:

- <https://blog.kissmetrics.com/google-webmaster-tools/>
- <https://search.google.com/search-console>
- <https://analytics.moz.com/pro/>

Technical SEO

Enhancing the Error Experience

- What happens when a user encounters an issue on your site?
- Provide clear error message
- Give suggestions on next steps or alternative content

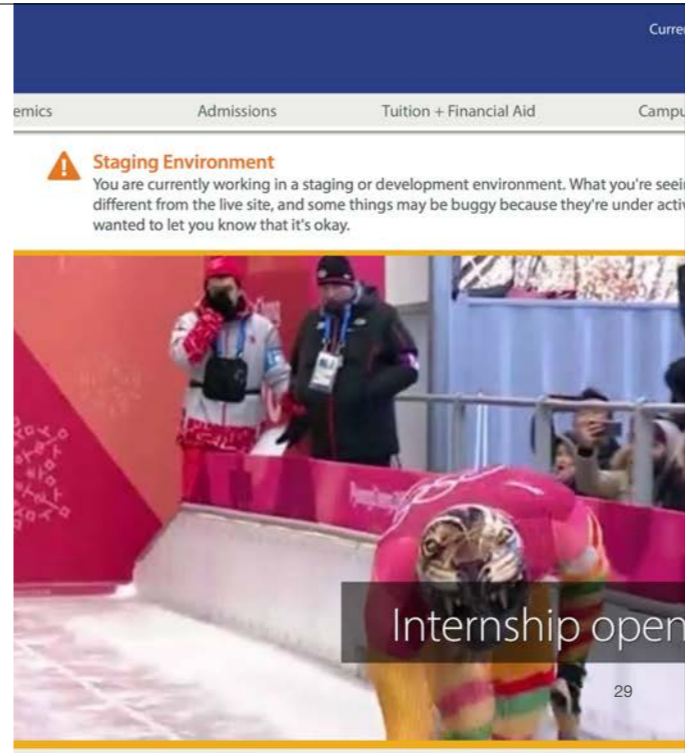
The screenshot shows a university website with a dark blue header containing the word 'aire' and navigation links for 'Academics', 'Admissions', and 'Tuition + Financial Aid'. The main content area is titled 'Inactive Profile' and contains a message: 'Audrey Fessler, Ph.D. is no longer with this institution. Browse the list below to find someone in a similar department or someone else.' Below this is a search bar with the placeholder text 'Search...'. The list of profiles includes:

- Ari Anand**
Geography + Anthropology | American Indian Studies | Women's Studies
Associate Professor, geography & anthropology, women's studies & American Indian Studies
715-836-5481 | anandas@uwec.edu
Phillips Science Hall 252
View full profile
- Jeffrey Goodman**
Psychology | Undergraduate Studies | Women's Studies | Office of Research
Director of Undergraduate Studies in Psychology | Associate Professor
715-836-2215 | goodmaja@uwec.edu

The profile for Jeffrey Goodman has a placeholder image labeled 'NO IMAGE'.

Non-Production Environment Considerations

- Prevent SEO issues by taking a few precautions
- Robots.txt and no-index for bots
- Be careful with canonical URLs (or don't use them here)
- Warnings for users





QUESTIONS

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