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| University of Massachusetts Boston  Functional Specification - Search | | |

## Document Version Control

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| --- | --- | --- | --- |
| Version | Author | Date | Changes |
| 1.0 | Craig Taylor [T4] | March 31, 2023 | Document Created |
| **2.0** | Michael Morley [t4] | June 12, 2023 | Version 2 |
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## Introduction

Terminalfour will be configuring Terminalfour Search to index and search UMass Boston – umb.edu. Terminalfour Search will be implemented using the Tier 2 Package. This solution is a pre-configured search solution providing a set of common university search features.

**Note:** The site(s) which are being indexed need to be publicly accessible and contain content to be indexed.

### Project Goals

The main goal for this project is provide a more comprehensive search for the umb.edu website, utilizing the enhanced functionality of the Terminalfour Search.

## Scope

UMass Boston has purchased a Terminalfour Search license for **25,000** documents.

The scope for the implementation of Terminalfour Search is:

* Indexing and search UMass Boston website using a variety of sources (XML and web), depending on the type of content.
* The site implementation includes 3 filters/facets and 4 collections.
* Wrap search results in website header and footer
* Style search results to match website design
* Create a search results page
* Updating the website to link the search box to the Terminalfour Search search.
* Auto-complete.
* Different search results templates for different collections (all search results are in one format for the Tier 2 package)

### Out of Scope

The following items are not within scope for this project:

* Indexing Pages which are password restricted
* Personalization of search results (all users see the same search results)

## Technical Architecture

The architecture is as follows:

Search term queries the search API and returns the search result to the webserver.

**Terminalfour Search API Server  
(search.umb.edu)**

User clicks on a search result

**Webserver (umb.edu)**

When a user performs a search, they will be taken from the web environment

Index site on a schedule

**NOTE:** When a user performs a search, the search code will query the search api and display the result on the UMass Boston web environment ([www.umb.edu](http://www.umb.edu)) Clicking on a search result (or a link within the results page header/footer) will navigate the user to the page.

### Robot Agent

Terminalfour will modify the robot file to allow Terminalfour Search to index the site.

## HTML Validation & Accessibility

### Coding Standards

Accessibility validation by Terminalfour will be performed using: <https://wave.webaim.org>.

### Browser & Platform Compatibility

Cross-browser testing included the latest versions of the following environments:

* Windows operating systems via a laptop: EDGE And Chrome.
* Mac OSX operating system via a laptop: Firefox, Chrome, and Safari.
* Android via a Samsung Galaxy: Android Browser and Chrome.
* iOS via iPhone 11, 12, and 6th generation iPad: Safari and Chrome.

Browser Testing will be carried out using Browser Stack (<http://www.browserstack.com/>).

## Search Page Layout

The following features will be enabled by Terminalfour:

* Related search

A picture containing text, font, white

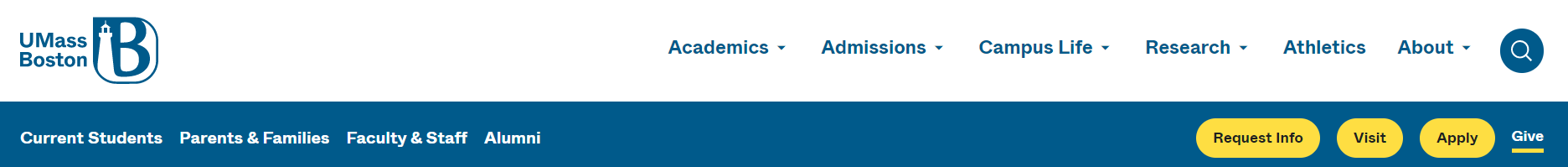
Description automatically generated

* Number of results per page (this will be set at 10 results per page by default)
* [Promoted Results](#_Promoted_Results)
* Auto-complete & auto-suggesting results
* Sort relevance

The following features will not be used or displayed:

* Advanced Search

The website search results page will appear similar to the following:



Graphical user interface, text, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Graphical user interface, application

Description automatically generated

Graphical user interface

Description automatically generated

(1) The header is managed through the CMS, using the Page Layout applied to the search page. Updates to this page will automatically reflect on the search results page.

(2) The facets/filters will be:

* Type: displays the different types of collections the user can filter – Website, Directory, Programs, News
* Colleges & Schools: displays results according to the breakdown of colleges and school branch of the CMS.

(3) Displays the number results found.

(4) Search results displayed. All results will be linked (it is not possible to have results that do not link).

(5) Related searches based on the keywords entered.

(6) Pagination of search results. By default, there are 10 results per page, but the user performing the search can change this.

(7) The footer is managed through the CMS, using the Page Layout applied to the search page. Updates to this page will automatically reflect on the search results page.

### Search Bar

Terminalfour will update the search bar within the header in the page layouts passing the query entered to the search page:   


Developer Notes:

The code for the search bar is located at Home > Site Assets > Common Header > Search Bar

Graphical user interface, text, application, email

Description automatically generated

## Page types

We will be running an index on your site for general webpages, there won’t be a page type applied to these and they will be categorized as General pages. Each other category will have a page type applied to it which will allow you to refine your results based on that.

### Index Schedule

All indexes will be scheduled to update on a daily basis.

### Website

Main university website crawl: <https://umbedu-lb01-production.terminalfour.net/> (on go-live it will be <https://www.umb.edu/>)

#### Content Indexing

This identifies the main part of the page which is indexed. This is done to make sure that navigation, header and footer aren’t included in the search.

Main content Block:

* .main-content .wrapper **Exclude** . c-menu-sidebar

#### Meta Data

* Title Tag
* URL
* Description / Content
* Page Type: blank

#### Results Format

Results will be formatted similar to:

A picture containing text, screenshot, font, line

Description automatically generated

**Implementation Analyst Note:**

**Code:**

<div class="box bg-ecru-light border-radius shadow-md p-l" data-animation="fade-in-up" data-animate="true"><div class="flow"><div class="h4 font-bold underline-full underline-orange"><a href="{{result.url}}">{{result.title}}</a>

</div>

<div class="flow flow-space-m">

<p>

<a href="{{result.url}}">{{ result.url }}</a><br />

{{result.description}} </p>

</div>

</div>

</div>

1. Title Tag
2. URL
3. Description / Content
4. Page Type: blank

Note: Terminalfour will update the results based on your designs

Developer Note:

Modify title to remove " – UMass Boston"

${s.result.title?replace("– UMass Boston ","")}

#### Facets

The following facets will be used by the general (website) collection, in the order stated below:

* Type: based on the collection, this will have the options of:
* Website
* Programs
* Directory
* News
* Events
* Colleges & Schools: based on <meta> tags placed in the sections of the branch at Home > Academics > Colleges & Schools

Similar to the following:

Graphical user interface, text, application

Description automatically generated

### Programs

#### MetaData

Terminalfour will update the page layouts to output the following data

PageType: Programs

ProgramName: <t4 type="content" name="Program Name" output="normal" modifiers="striptags,htmlentities" />

ProgramOverview: <t4 type="content" name="Program Overview" output="normal" modifiers="striptags,htmlentities" />

ProgramDegree: <t4 type="content" name="Degree Type" output="normal" display\_field="value" />

ProgramFormat: <t4 type="content" name="Program Format" output="normal" display\_field="value" />

ProgramDepartment: <t4 type="content" name="Department" output="normal" display\_field="value" />

Each program is an <item> within the XML.

Some programs have multiple values for some elements (e.g. Campuses), and these are separated in the XML using a comma.

#### Results Format

Graphical user interface, text, application, email

Description automatically generated

The following XML elements are used:

1. Element name: Program Name  
   Tag name: program-name
2. Tag name: link
3. Element name: Program Overview  
   Tag name: program-overview
4. Element name: Degree  
   Tag name: degree
5. Element name: Program Format  
   Tag name: program-format

Styling will used the following HTML:

Example: <http://umass.mstoner.com/tertiary-plain.html>

A screenshot of a computer

Description automatically generated with low confidence

### Directory

#### MetaData

Terminalfour will update the page layouts to output the following data

PageType: Directory

DirectoryName: <t4 type="content" name="First Name" output="normal" modifiers="striptags,htmlentities" /> <t4 type="content" name="Last Name" output="normal" modifiers="striptags,htmlentities" />

DirectoryDepartment: ><t4 type="content" name="Department" output="normal" display\_field="value" />

DirectoryEmail <t4 type=”Content” name=”Email” output=”normal” />

DirectoryTitle: <t4 type="content" name="Title" output="normal" modifiers="striptags,htmlentities" />

#### Results Format

A picture containing text, screenshot, font, white

Description automatically generated

The following XML elements are used:

1. DirectoryName
2. DirectoryTitle, DirectoryDepartment
3. DirectoryEmail

Styling will used the following HTML:

Example: <http://umass.mstoner.com/tertiary-plain.html>

A screenshot of a computer

Description automatically generated with low confidence

### News

#### MetaData

PageType: News

NewsTitle: <t4 type="content" name="Title" output="normal" modifiers="striptags,htmlentities" />

NewsIntroduction: ><t4 type="content" name="Introduction" output="normal" modifiers="striptags,htmlentities" />

NewsAuthor: <t4 type="content" name="Degree Type" output="normal" display\_field="value" />

NewsCategory: <t4 type="content" name="News Category 1" output="normal" display\_field="value" />

#### Results Format

Results will be formatted similar to:

A picture containing text, website, web page, screenshot

Description automatically generated

1. NewsTitle
2. NewsAuthor
3. NewsIntroduction

Styling will used the following HTML:

Example: <http://umass.mstoner.com/tertiary-plain.html>

A screenshot of a computer

Description automatically generated with low confidence

### Events

#### MetaData

PageType: Events

EventTitle: <t4 type="content" name="Title" output="normal" modifiers="striptags,htmlentities" />

EventIntroduction: ><t4 type="content" name="BriefDescription" output="normal" modifiers="striptags,htmlentities" />

EventDate: <t4 type="content" name="Degree Type" output="normal" display\_field="value" />

EventTitle: <t4 type="content" name="Degree Type" output="normal" display\_field="value" />

EventLocation: <t4 type="content" name="Location" output="normal" modifiers="striptags,htmlentities" />

EventCategory: <t4 type="content" name="News Category 1" output="normal" display\_field="value" />

#### Results Format

Results will be formatted similar to:

A picture containing text, screenshot, font

Description automatically generated

1. EventTitle
2. EventDate
3. EventTime
4. EventIntroduction
5. EventCategory

Styling will used the following HTML:

Example: <http://umass.mstoner.com/tertiary-plain.html>

A screenshot of a computer

Description automatically generated with low confidence

## Promoted Results

Terminalfour will implement one sample “Promoted Results External” and one sample “Promoted Results Internal” to demonstrate the functionality and test the layouts.

### Promoted Results External

External Promotions let you open up more possibilities to engage with your audience. Some other use cases include:

* Curating a path for users who land in your search thinking your site holds their answers
* Highlighting events, special courses, or conferences from partners
* Promoting internal links so they will appear separately from other promoted items
* Advertising links to commerce websites for your users looking to purchase items
* Cross-promoting content from affiliated companies or from your local community

It will be triggered by the words “Admissions” and will display

Admissions

For more information regarding admissions policies at Howard Community College, please see the Howard CC Catalog. College readiness assessment is required prior to enrollment.

<https://umb.edu/admissions>

Terminalfour will style the external promoted result to look like this:

A blue sign with white text

Description automatically generated with medium confidence

Developer Note

Code:

<div class="hidden flow flow-space-l lg:block">

<div class="invert bg-blue border-radius p-l" data-animation="fade-in-up" data-animate="true">

<h2 class="h3">{{result.title}}</h2>

<a href="{{result.url}} ">{{result.url}} </a>

<div class="bordered">

<div class="flow flow-space-m">

<div>

{{result.description}} </div>

</div>

</div>

</div>

</div>

### Promoted Results Internal

This is used to promote results internally of your site based on search term or logic.

It will be triggered by the words “library and will display:

WISER has been updated to use the same login as Office365/Webmail and Blackboard. Please sign in with your **full campus email address (including '@umb.edu')** and password.

* [**Student Log-in**](https://campus.sa.umasscs.net/psp/csm/EMPLOYEE/SA/c/SA_LEARNER_SERVICES.SSS_STUDENT_CENTER.GBL?PORTALPARAM_PTCNAV=HC_SSS_STUDENT_CENTER&EOPP.SCNode=SA&EOPP.SCPortal=EMPLOYEE&EOPP.SCName=CO_EMPLOYEE_SELF_SERVICE&EOPP.SCLabel=Self_Service&EOPP.SCPTfname=CO_EMPLOYEE_SELF_SERVICE&FolderPath=PORTAL_ROOT_OBJECT.CO_EMPLOYEE_SELF_SERVICE.HC_SSS_STUDENT_CENTER&IsFolder=false&gsmobile=1)
* [**Faculty & Staff Log-in**](https://campus.sa.umasscs.net/psc/csm/EMPLOYEE/SA/c/NUI_FRAMEWORK.PT_LANDINGPAGE.GBL?gsmobile=0)
* [**Designated Access Log-in**](https://sa-prd.erp.umasscs.net/psp/parent/?cmd=login&languageCd=&ENG&gsmobile=1)
* [**Degree Audit Log-in**](https://uac-bos-prd.umasscs.net/selfservice/)

Need Help? [**View the WISER FAQs**](https://www.umb.edu/it/wiser/wiser_faq#panel1) or [**contact IT Support**](http://www.umb.edu/it/help)

Custom CSS classes can be assigned to curator results using the CSS class name attribute.

## Go-Live

As part of go-live, the following actions will be completed by Terminalfour:

* Update the Search bar to link to the Production Terminalfour Search URL and not the staging URL located within Home > Site Assets > Common Header > Search Bar.
* Terminalfour Search URL - <https://www.umb.edu/search/>
* Update the crawl to point at the live url [www.umb.edu](http://www.umb.edu) and not a staging URL.

The actions are mentioned in the go-live checklist which will be sent to UMass Boston ahead of go-live.

## Document Sign off

This functional specification contains fully all works to be carried out by Terminalfour for UMass Boston. Any work outside of this, will be controlled via the standard change control process and will have to be agreed by both parties. Please see the Scope document for further clarification on the Change Control Process.

This specification was agreed and signed off by Brittany Terpstra, Director of Website Development from UMass Boston on behalf of their project board by email sent to Paul Grant, TerminalFour Project Manager, dated [insert date and time].