

An Introduction to Custom Post Types

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About Me

- Over 10 years as a graphic designer
- Over 6 years as a web designer and developer
- Over 4 years at Carleton University developing solely with WordPress as a CMS
- Always looking to learn new tricks to push WordPress themes to new levels



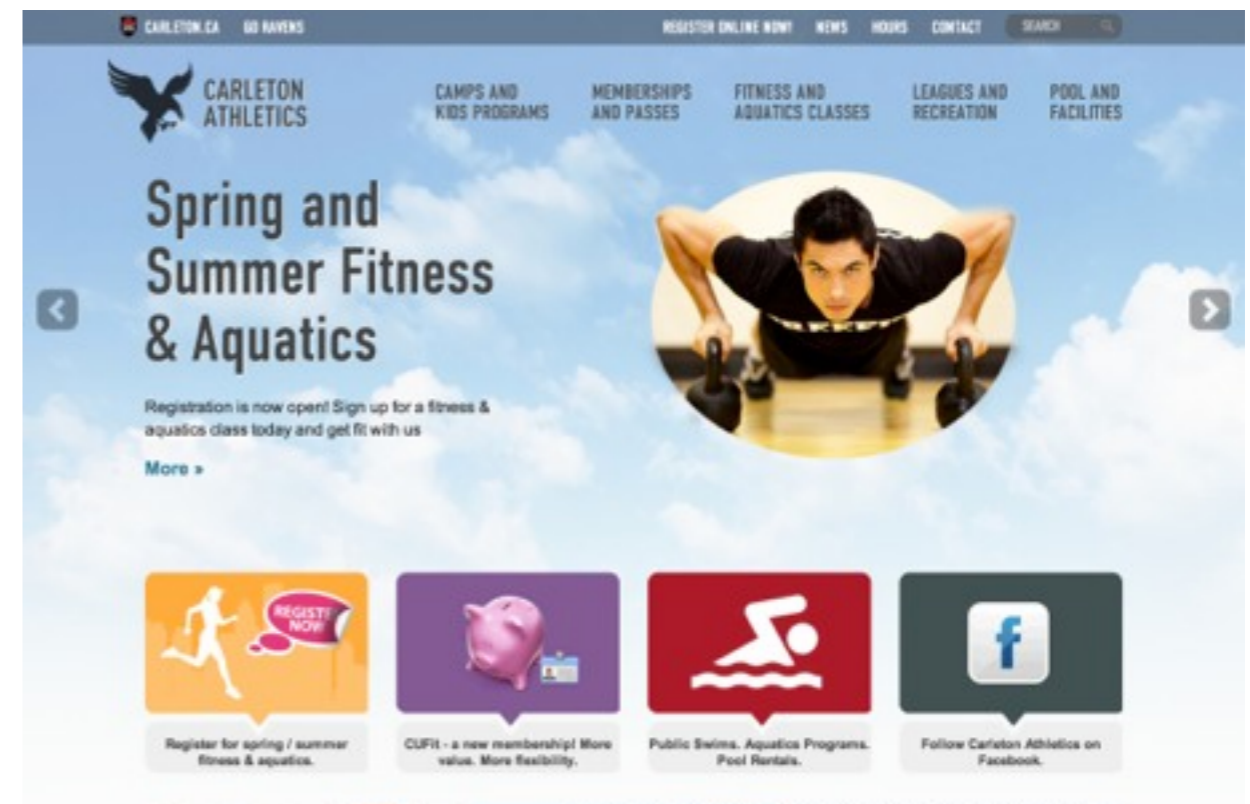
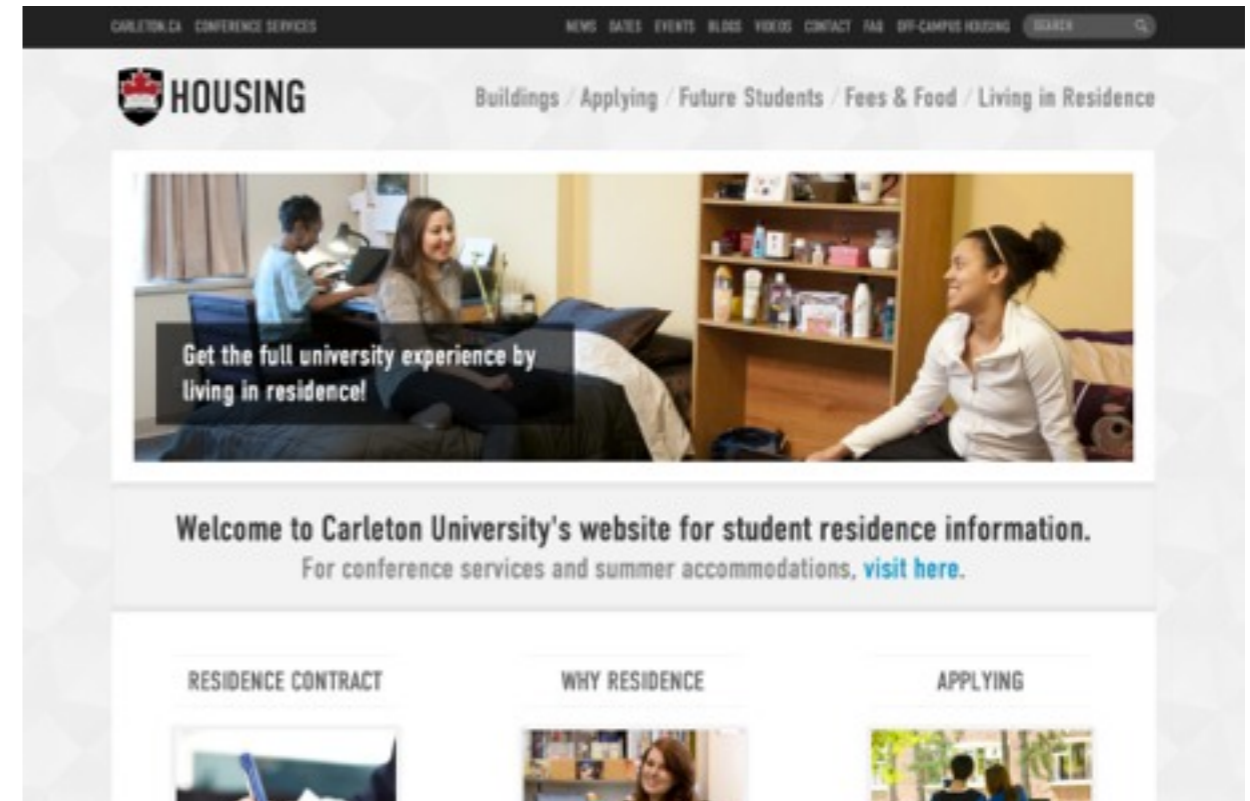
Carleton and WP

- Started using WordPress to power news areas of existing CMS sites
- In 2009, migration of nearly 40 legacy CMS sites into WordPress began
- Currently over 250 sites powered by WordPress
- WordPress is so embedded as a CMS that we are often asked if it can be used as a blog!

The screenshot shows the Carleton CMS website. At the top, there is a navigation bar with links for CARLETON.CA, ABOUT, ADMISSIONS, ACADEMICS, RESEARCH, CAMPUS LIFE, FUTURE STUDENTS, CURRENT STUDENTS, STAFF/FACULTY, and ALUMNI. Below this is the Carleton CMS logo and a search bar. The main content area features a large image of hands typing on a keyboard. A red banner below the image contains the word "Welcome" and two buttons labeled "Test Key Link 1" and "Test Key Link 2". On the left side, there is a sidebar menu with links for News, Events, About Carleton CMS, CMS Manual, Video Training Tutorials, Our Team, and Support. The main content area includes a paragraph about the CMS project, a "Quick Links" section with four tiles for CMS Documentation, New Video Tutorials, Training Sessions, and Google Analytics, a "News" section with two articles, and a footer area.

Custom CMS'

- At Carleton we also designed and developed unique sites with WordPress
- Sites that require a different look and feel than that of the standard template
- Sites that have needs outside of the standard functionality of Carleton CMS
- To date, over 20 custom WordPress themes power these unique sites





About the Functions

An Overview

About Custom Post Types

- If you've used WordPress you may be surprised to know that you've been using Custom Post Types all along
- WordPress uses 5 default post types: posts, pages, attachments, revisions and nav menus
- Provide the ability to create new content areas and separate specific types of content on large scale sites
- Designers and developers can create layouts and functionality that act independently from the standard pages and posts
- Used by several plugins to add specific functionality that does not impact the default post types

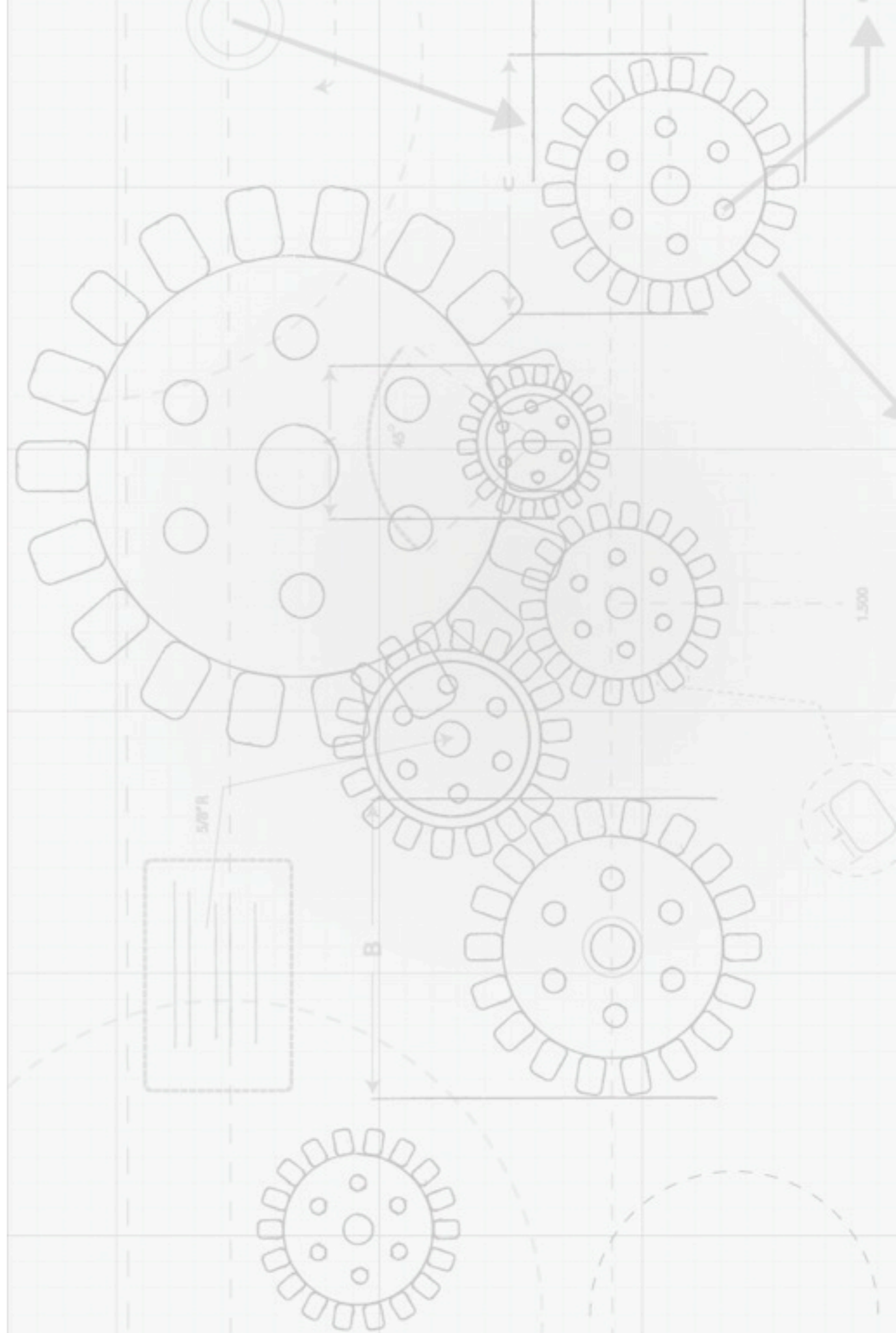
What's in a Name?

- Custom Post Type? Isn't that the same thing as a post? What makes it different from a post?
- I prefer to think of it as a Custom Content Type
- It is a unique content type that is tied to none of the default items and acts as a standalone content area



Functionality

- Mirror functionality of posts: non-hierarchical, categories and tagging capabilities
- Reflect the pages environment: page attributes, parent-child relationships
- Support several defaults such as title, editor, excerpt, revisions, thumbnails, comments and more
- Both act independently from the default pages and posts, and can be tailored to suit a variety of needs



Registering your Custom Post Type

```
function wordcamp_post_type() {
    $labels = array(
        'name' => 'Notes',
        'singular_name' => 'Note',
        'add_new' => 'Add New',
        'add_new_item' => 'Add New Note',
        'edit_item' => 'Edit Note',
        'new_item' => 'New Note',
        'all_items' => 'All Notes',
        'view_item' => 'View Note',
        'search_items' => 'Search Notes',
        'not_found' => 'No Notes found',
        'not_found_in_trash' => 'No Notes found in Trash',
        'parent_item_colon' => '',
        'menu_name' => 'Notes'
    );

    $args = array(
        'labels' => $labels,
        'public' => true,
        'publicly_queryable' => true,
        'show_ui' => true,
        'show_in_menu' => true,
        'query_var' => true,
        'rewrite' => array( 'slug' => 'wordcamp-notes' ),
        'capability_type' => 'post',
        'has_archive' => true,
        'hierarchical' => false,
        'menu_position' => null,
        'supports' => array( 'title', 'editor', 'thumbnail', 'excerpt', 'comments' )
    );

    register_post_type( 'wc-notes', $args );
}
add_action( 'init', 'wordcamp_post_type' );
```

Custom Post Type Theme Files

- Custom Post Type archive page templates function similarly to the category template and use the file naming convention: [archive-custom_post_name.php](#)
- Single page templates function like a default page or post and use the file naming convention: [single_custom_post_name.php](#)
- Based on the function example in previous slide, my template files would be named: [archive-wc-notes.php](#) and [single-wc-notes.php](#)
- If neither of these template files exist WordPress would look for and use the [archive.php](#) and [single.php](#) templates
- Default URL structure for the Custom Post Type uses `post_type_name`, but can be customized with the `rewrite` parameter

Displaying with WP_Query

```
<?php

$args = array(
    'post_type'    => 'wc-notes',
    'posts_per_page' => 3
);

// THE QUERY
$query = new WP_Query( $args );

// THE LOOP
if ( $query->have_posts() ) {

    while ( $query->have_posts() ) {
        $query->the_post();

        // DO MORE STUFF HERE
        echo '<p>' . get_the_title() . '</p>';
    }

} else {

    // NO POSTS FOUND MESSAGE
    echo '<p>Sorry, there are no posts</p>';

}

// RESTORE ORIGINAL POST DATA
wp_reset_postdata();

?>
```


About Taxonomies

- Just like Custom Post Types, anyone who has most likely used WordPress has used taxonomies
- WordPress uses 3 default taxonomies: categories, tags and link categories
- Provide the ability to add new levels of organization within a given post type
- Can be used in conjunction with the default pages or posts, or with your custom post types. Can also be shared between two or more post types
- Can be hierarchical (like categories) or non-hierarchical (like tags)
- Allow for a greater level of navigational options for your visitors

Registering your Taxonomy

```
add_action( 'init', 'create_wc_notes_taxonomies', 0 );

function create_wc_notes_taxonomies() {

    $labels = array(
        'name'          => _x( 'Speakers' ),
        'singular_name' => _x( 'Speaker' ),
        'search_items'  => __( 'Search Speakers' ),
        'all_items'     => __( 'All Speakers' ),
        'parent_item'   => __( 'Parent Speaker' ),
        'parent_item_colon' => __( 'Parent Speaker:' ),
        'edit_item'     => __( 'Edit Speaker' ),
        'update_item'   => __( 'Update Speaker' ),
        'add_new_item'  => __( 'Add New Speaker' ),
        'new_item_name' => __( 'New Speaker Name' ),
        'menu_name'     => __( 'Speaker' ),
    );

    $args = array(
        'hierarchical' => true,
        'labels'       => $labels,
        'show_ui'      => true,
        'show_admin_column' => true,
        'query_var'    => true,
        'rewrite'      => array( 'slug' => 'speaker' ),
    );

    register_taxonomy( 'speaker', array( 'wc-notes' ), $args );

}
```

Taxonomy Theme Files

- Taxonomy archive page templates can function similar to an archive, or category and tag template and uses the file naming convention: [taxonomy-custom_tax_name.php](#)
- Based on the function example in previous slide, my template files would be named: [taxonomy-speaker.php](#)
- If this template file does not exist WordPress would look for and use the [taxonomy.php](#). If that is not available, it would then look for [archive.php](#)
- Templates for individual terms can be create by using a template file named: [taxonomy-custom_tax_name-term_name.php](#) (If my name is a term, the file name would be: [taxonomy-speaker-troy-chaplin.php](#))

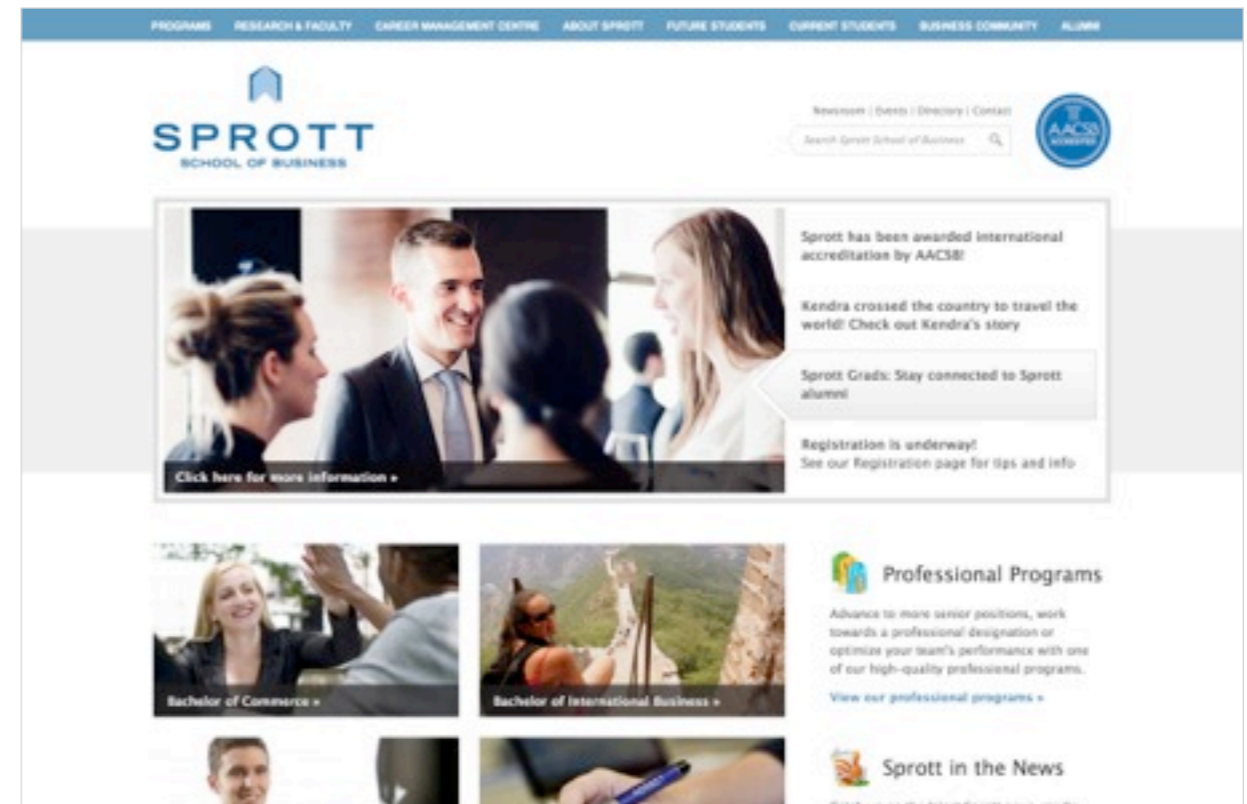


Found in the Wild

Examples and Ideas

Spratt School of Business

- Homepage: customizable slideshow and content blocks
- Events: chronologically sorted upcoming events list, includes taxonomy for event types
- Directories: alphabetically sorted list of staff and faculty, include taxonomies to filter by staff or faculty; academic areas; and faculty type

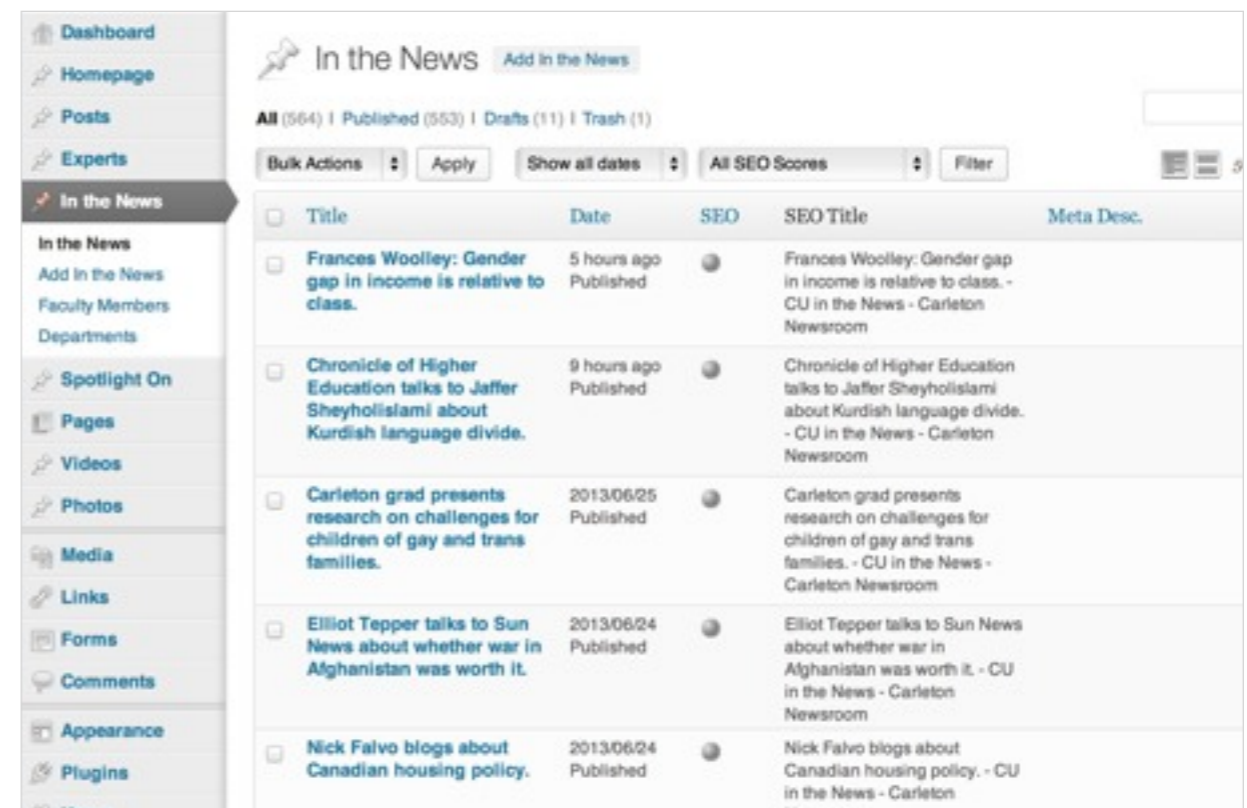
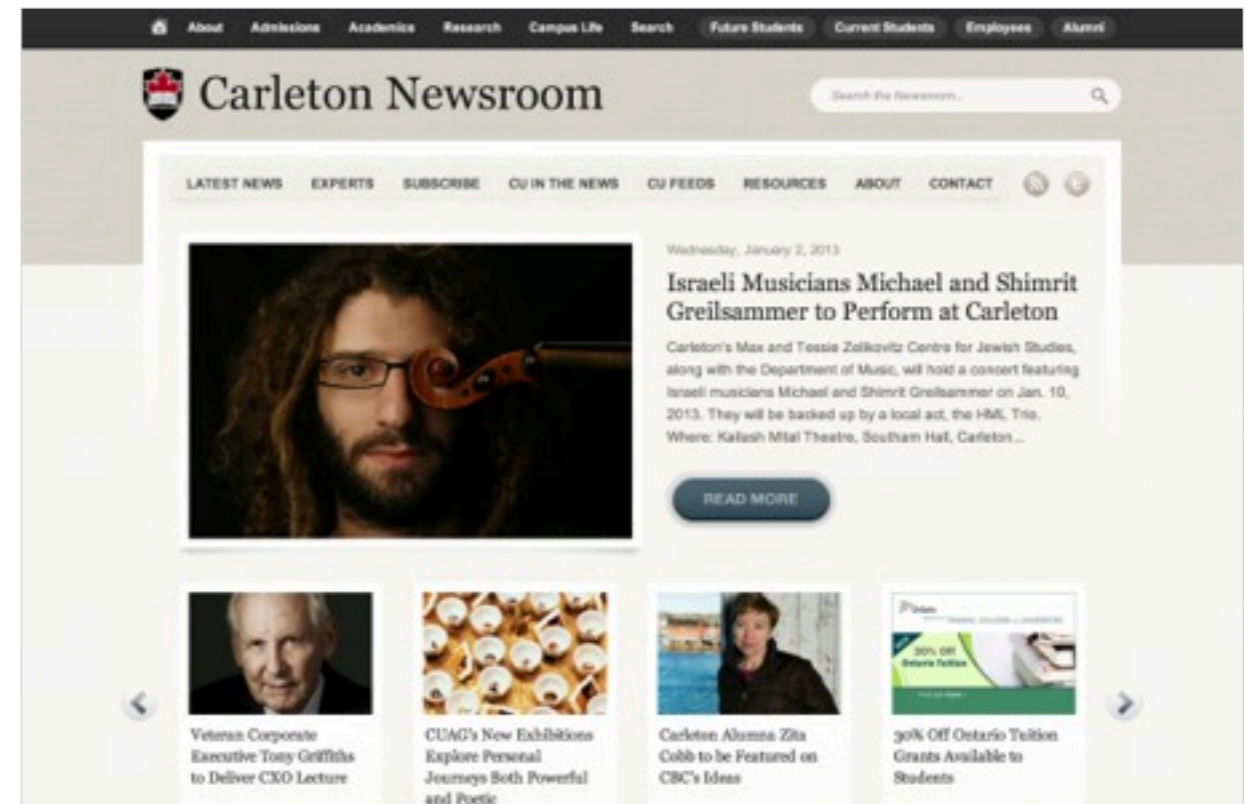


The screenshot shows the directory page of the Spratt School of Business. The page has a sidebar with navigation links: Dashboard, Homepage, Posts, Events, Pages, Directory (selected), Media, Links, Forms, Comments, Appearance, Plugins, Users, and Tools. The main content area is titled "Directory" and includes an "Add Person" button. Below the title, there are filters for "Bulk Actions", "Apply", "Show all dates", "All SEO Scores", and "Filter". The directory is displayed as a table with columns for Title, Date, SEO, SEO Title, and Meta Desc.

Title	Date	SEO	SEO Title	Meta Desc.
<input type="checkbox"/> Allen, Alanna	2011/07/03 Published	●	Allen, Alanna - Directory - Spratt School of Business	
<input type="checkbox"/> Anderson, Troy	2011/07/03 Published	●	Anderson, Troy - Directory - Spratt School of Business	
<input type="checkbox"/> Bailetti, Tony	2011/07/03 Published	●	Bailetti, Tony - Directory - Spratt School of Business	
<input type="checkbox"/> Beauregard, Courtenay	2011/07/03 Published	●	Beauregard, Courtenay - Directory - Spratt School of Business	
<input type="checkbox"/> Becker, Hilary	2011/07/03 Published	●	Becker, Hilary - Directory - Spratt School of Business	
<input type="checkbox"/> Brouard, François	2011/07/03 Published	●	Brouard, François - Directory - Spratt School of Business	
<input type="checkbox"/> Brzozowski, Alana	2012/12/17 Published	●	Brzozowski, Alana - Directory - Spratt School of Business	
<input type="checkbox"/> Bujaki, Merridee	2012/07/03 Published	●	Bujaki, Merridee - Directory - Spratt School of Business	

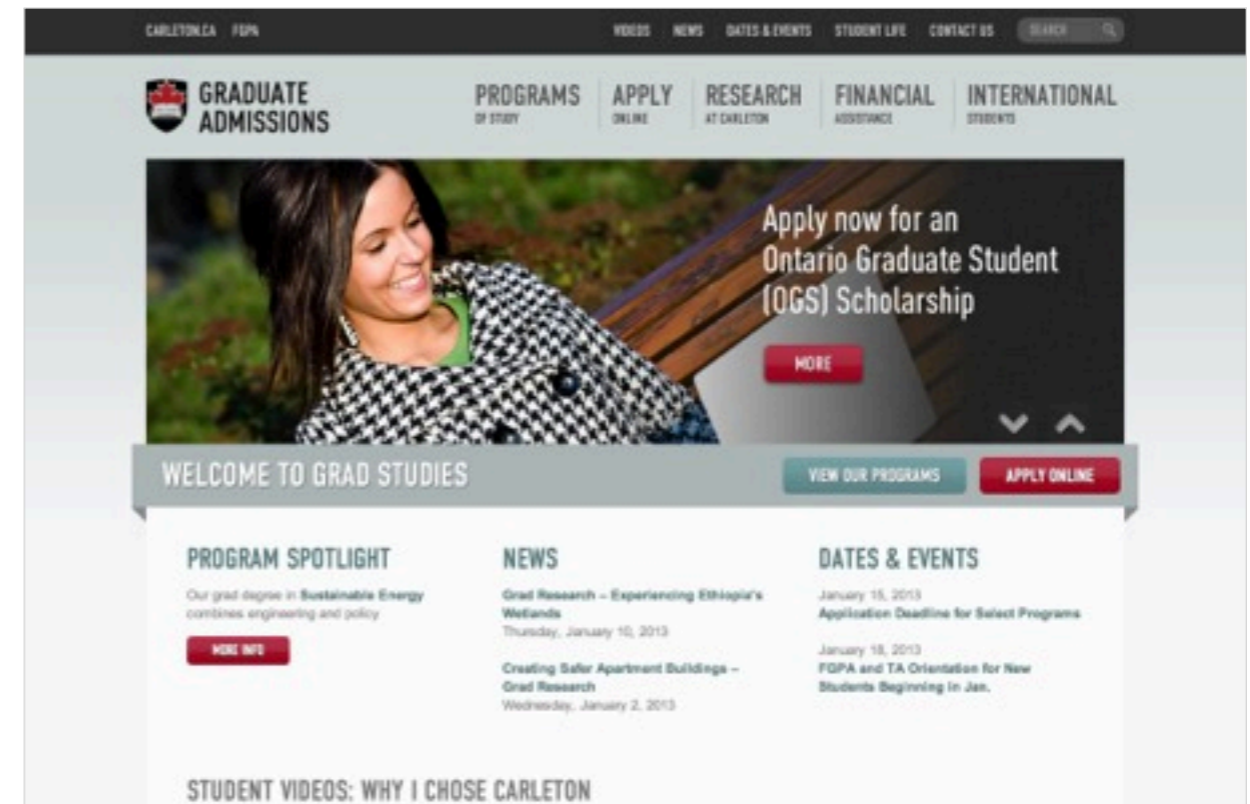
Carleton Newsroom

- Homepage: customizable featured articles, an other content areas
- Experts: listing and profiles of on-campus experts, includes taxonomies for expertise, topics, and languages
- In the News and Spotlight On: internal and external news stories used to feed into main Carleton.ca homepage
- Photo Galleries
- Video Archives



Graduate Admissions

- Homepage: customizable slideshow, program spotlight, video feeds and more
- Programs: alphabetical list of programs, includes taxonomies for program types, faculty, degrees, entry terms and pathway options
- International Requirements: alphabetically sorted by country
- Upcoming Events, Video Archive



The screenshot shows the 'Programs' management interface. On the left is a sidebar with navigation options: Dashboard, Homepage, Posts, Programs (selected), Pages, Events, Videos, International Requirements, Bloggers, Media, Links, Forms, and Comments. The main area displays a list of programs with columns for Title, Date, SEO, SEO Title, and Meta Desc. The list includes:

Title	Date	SEO	SEO Title	Meta Desc.
<input type="checkbox"/> Aerospace Engineering (Master's)	2012/04/17 Published	●	Aerospace Engineering (Master's) - Programs - Graduate Admissions	Carleton's master's programs in Mechanical and Aerospace Engineering are offered through the Ottawa-Carleton Institute for Mechanical and Aerospace Engineering which combines the research strengths and resources ...
<input type="checkbox"/> Aerospace Engineering (PhD)	2012/04/17 Published	●	Aerospace Engineering (PhD) - Programs - Graduate Admissions	
<input type="checkbox"/> African Studies (collaborative only) (Master's)	2012/07/19 Published	●	African Studies (collaborative only) (Master's) - Programs - Graduate Admissions	
<input type="checkbox"/> Anthropology (Master's)	2012/04/17 Published	●	Anthropology (Master's) - Programs - Graduate Admissions	Carleton's MA in anthropology promotes the exploration of cultural practices and social conditions in diverse countries throughout the world including Africa, Asia, North America, South America and Oceania.
<input type="checkbox"/> Anthropology (PhD)	2012/04/17	●	Anthropology (PhD) - Programs	

Carleton Athletics

- Campus and Kids Programs
- Fitness and Aquatics
- Leagues and Recreation
- Pools and Facilities
- Sitewide Advertisements

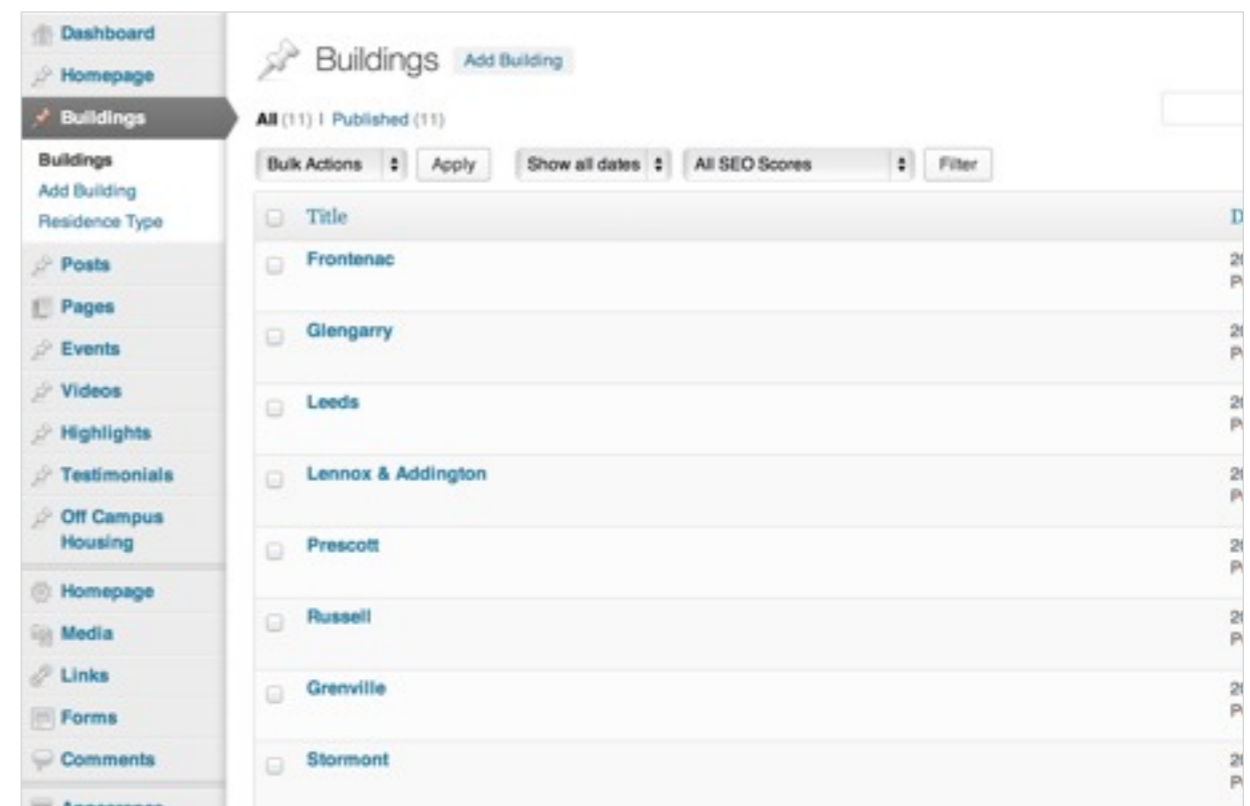
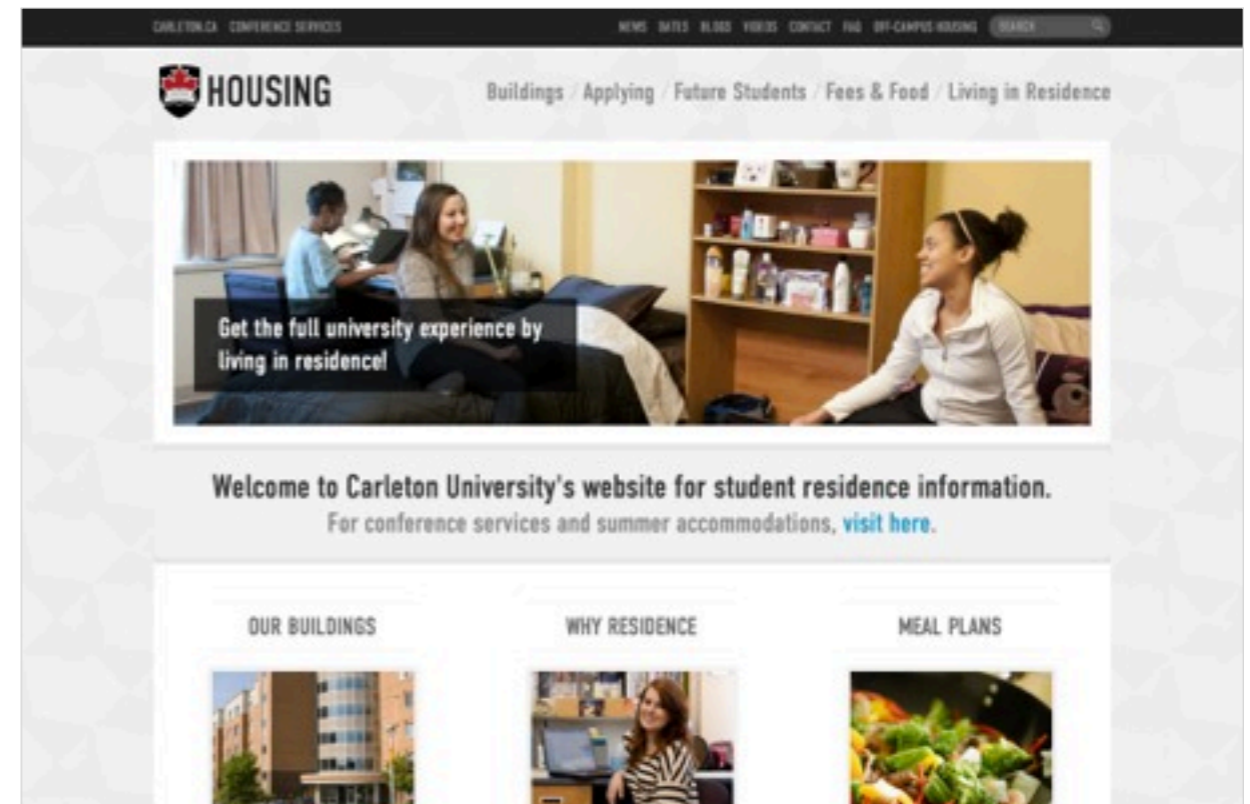


The screenshot shows the WordPress admin interface for the 'Fitness' category. The left sidebar contains a navigation menu with options like 'Dashboard', 'Homepage', 'Posts', 'Pages', 'Camps and Kids Programs', 'Fitness Classes', 'Aquatic Programs', 'Leagues and Recreation', 'Facilities', 'Advertisements', 'Media', 'Links', 'Comments', 'Appearance', and 'Plugins'. The main content area is titled 'Fitness' and includes a sub-header 'Add Fitness'. Below this, there are statistics for 'All (241)', 'Published (107)', 'Drafts (134)', and 'Trash (3)'. A 'Bulk Actions' dropdown is set to 'Apply', and 'Show all dates' is set to 'All SEO Scores'. A table lists the following items:

<input type="checkbox"/>	Title	Date	SEO	SEO Title	Meta Desc.
<input type="checkbox"/>	CUFit Pass	2012/07/16 Published	●	CUFit Pass	
<input type="checkbox"/>	Aquatic Programs	2012/07/16 Published	●	Aquatic Programs	
<input type="checkbox"/>	-- Water Polo Leagues	2012/08/10 Published	●	Water Polo Leagues	
<input type="checkbox"/>	-- -- Summer Water Polo League (CUSWPL)	2013/06/06 Published	●	Summer Water Polo League (CUSWPL)	
<input type="checkbox"/>	-- Aquafit	2012/08/10 Published	●	Aquafit	
<input type="checkbox"/>	-- -- Swimnastics	2013/03/29 Published	●	Swimnastics	
<input type="checkbox"/>	-- Learn to Swim: Adults	2012/08/10 Published	●	Learn to Swim: Adults	
<input type="checkbox"/>	-- -- Level 1	2013/04/05 Published	●	Level 1	

Carleton Housing

- Buildings: alphabetical listing of residences, includes taxonomy for residence types
- Off-Campus Housing: listing of available accommodations off-campus, includes taxonomies for areas, types and various details
- Homepage, Upcoming Events, Video Gallery, Promotional Items, Testimonials



Go Ravens

- Teams: creates hierarchical team structure for news, schedule, rosters and stats, pulls content from other post types and taxonomy terms
- Rosters: team member profiles, includes taxonomies for team, year, and type (player / coach)
- Schedule: chronological list of upcoming games and event, includes taxonomy for sport, season type and year
- Homepage, Clubs, Sponsors, Testimonials



Other Ideas to Consider

- Entertainment Sites: Custom Post Type for various content sections (movies, tv shows, games, music, etc) with taxonomies to further categorize (genre, ratings, year, etc.)
- Online Magazines: Custom Post Types for individual editorial sections (featured stories, letters to the editor, shorts, guest columns, etc) with taxonomies to further categorize
- Members Area: archive and sections only visible when user is logged in, kept separate from publicly visible content. Login box visible to public on archive / single pages, content revealed when user logs in
- Research Profiles: Custom Post Type for researchers profile to coincide with research items in a second Custom Post Type with Taxonomies to categorize by areas of research, year, publication type and more



Information Overload?

Let's wrap this up!

Things to Remember

- Use Custom Post Types to create unique content areas that are different from your posts and pages
- Use Taxonomies to add new ways to organize content that are separate from categories and tags
- Not comfortable with code? Use a plugin, there are several out there. (Custom Post Type UI and Types come to mind)





Think Outside the Box

Nothing is impossible

Questions?

Thank you for coming out! Enjoy the rest of WordCamp Montreal!

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