



RED AIRSHIP

Red Airship Academy

Drupal Site-building Course (Basic to intermediate)

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Course Introduction

The Drupal site-building course is designed as a well-rounded introduction to Drupal as a CMS, to provide students the foundation and tools to continue exploring Drupal after the course. Topics are designed to be relevant to practical real-world usage so that all students can start leveraging their new skills immediately. Topics peripheral to site-building, such as SEO, hosting, and online security will also be touched on.

The lesson plan balances content delivery and hands-on exercises so that students experiment with new knowledge in a timely manner to aid internalization of concepts. To induce self-motivation, students are exposed gradually to exciting features and functionalities that lead on to the concepts and topics covered in the next lesson. The pacing of the syllabus is also suitable for students with zero or little development background, as much of the necessary concepts are covered during the course and no coding is required.

Most lessons starts with a lecture with demonstrations, followed by individual or group exercises.

[Basic Site-building \(20hrs\)](#)

[Lesson 1: Web fundamentals \(4hrs\)](#)

[Lesson 2: Drupal as a CMS \(4hrs\)](#)

[Lesson 3: Components of a Drupal website \(4hrs\)](#)

[Lesson 4: Contrib modules Part 1 \(4hrs\)](#)

[Lesson 5: Contrib modules Part 2 \(4hrs\)](#)

[Intermediate Site-building \(20hrs\)](#)

[Lesson 6: Views and features \(4hrs\)](#)

[Lesson 7: Migrations, operations, and installation profiles \(4hrs\)](#)

[Lesson 8: Advanced contrib modules Part 1 \(4hrs\)](#)

[Lesson 9: Advanced contrib modules Part 2 \(4hrs\)](#)

[Lesson 10: Installation profiles, ecommerce and communities \(4hrs\)](#)

Basic Site-building (20hrs)

The first 5 lessons focuses on understanding and using Drupal as a content management system. It covers the fundamental concepts and building blocks in Drupal, and explores a list of frequently used contributed modules available in the ecosystem. Students will learn how to set up their own Drupal instance and see how core and contributed modules work together to build commonly-requested functionality.

Lesson 1: Web fundamentals (4hrs)

1. What is the web
 - a. URL's, protocols, request and responses
 - b. Web servers and browsers
2. Components of a web page
 - a. HTML
 - b. CSS
 - c. Javascript
 - d. PHP
3. Components of a web server
 - a. Web server
 - b. Database
 - c. Caching
 - d. Content Delivery Networks
 - e. DNS
4. Frameworks
 - a. Using frameworks v.s. writing your own
 - b. Kinds of frameworks
 - c. Content management systems CMS
5. Exercise #1: Installing drupal

- a. Creating the database
- b. Standard installation profile
- c. Create your first page in Drupal

Lesson 2: Drupal as a CMS (4hrs)

1. How Drupal manages content
2. Core content management concepts
 - a. Nodes
 - i. Content types
 - ii. Statuses
 - iii. Fields
 - iv. Revisions
 - v. View modes
 - vi. Paths
 - vii. Comments
 - b. Taxonomy
 - i. Vocabularies
 - ii. Terms
 - c. Blocks
 - i. Regions
 - ii. Visibility
 - d. Pages
 - e. Menus
 - f. Basic search
 - g. Variables

3. Image styles
4. Text input formats
5. Date time formats
6. User access management concepts
 - a. Users
 - b. Roles
 - c. Permissions
 - d. Passwords
 - e. Email content
7. Exercise #2: Community website
 - a. Header
 - b. About us and contact us
 - c. Articles
 - d. Footer

Lesson 3: Components of a Drupal website (4hrs)

1. Components of a Drupal website
 - a. Directory structure
 - b. Modules
 - c. Themes
 - d. Configuration
 - e. Installation profiles
2. Considerations for site building
 - a. Minimize complexity
 - b. Repeatable, transparent patterns

- c. Portability
3. Modules
- a. Why modules
 - b. Contrib v.s. core v.s. custom
 - c. Where to find modules online
 - i. How to determine if a module is safe for production
 - ii. How to choose a version of a module
 - d. Directory management (where to put what)
 - i. Module nesting
 - e. Installing modules
 - i. Web UI
 - ii. File system
 - iii. Drush
 - iv. Special installation instructions
 - v. Install v.s. enable
 - f. Versions and updates
4. Themes
- a. Public v.s. admin themes
 - b. Base themes
 - c. Responsive themes
 - d. Directory management (where to put what)
5. How caching works in Drupal
6. Exercise #3
- a. Find, install, and enable the following modules:
 - i. Admin menu
 - ii. Module filter

- iii. Date
- iv. Link
- v. Media
- vi. Addressfield
- vii. Rating
- viii. Bootstrap theme

- b. Update the article content type in your community website using the new fields.

Lesson 4: Contrib modules Part 1 (4hrs)

- 1. Basic modules (Modules with focused, obvious uses)

- a. Different field types (covered in lesson 3)
- b. jQuery Update
- c. PathAuto
- d. Field groups
- e. CKEditor
- f. IMCE
- g. Conditional fields
- h. Metatags
- i. XML Sitemap
- j. Google analytics

- 2. Intermediate (Modules that integrate with various other modules, more conceptual uses)

- a. Flag
- b. Fivestar
- c. Entity reference
- d. Field collections

- e. Token
 - f. Libraries
 - g. TB Megamenu
 - h. Message
 - i. Context
 - j. Private message
 - k. Devel
3. Exercise #4
- a. Implement a rating system that allows registered users to rate and review content.
 - b. Re-organize your create content form to be more user-friendly.
 - c. Improve the SEO of your content
 - i. designing your urls
 - ii. providing metadata
 - iii. Submitting sitemaps to google and other search engines

Lesson 5: Contrib modules Part 2 (4hrs)

- 1. Display suite Basic
 - a. Custom view modes
 - b. Custom view layouts
 - c. Form layouts
 - d. Custom wrappers
 - e. Custom fields
- 2. Panels Part 1
 - a. Creating pages
 - b. Layouts

- c. Creating and arranging content in panels
 - d. In-place editing
 - e. Panels for node views
 - f. Panels for node forms
3. Exercise #5
- a. Creating a listing page for your content, including sorting by popular, latest content.
 - b. Create a landing page for your website.
 - c. Turn your node form into a 2 columns layout using display suite
 - d. Turn your node form into a 2 columns layout using panels
 - e. Compare and contrast the 2 methods, what are the pros and cons?

Intermediate Site-building (20hrs)

The next 5 lessons focuses on more advanced contributed modules which extends Drupal's capabilities outside of basic content management. Students will learn how to manage and export data using views, how backups and migrations can be done, and how the rules module allow custom workflows to be configured without using code.

The last lesson gives students an eye-opener of advanced Drupal sites built by the online community.

Lesson 6: Views and features (4hrs)

- 1. Views Part 1
 - a. Introduction to views
 - b. Displays (page, blocks)
 - c. Format
 - d. Fields
 - e. Filter criteria

- f. Sorting
 - g. Paging
 - h. Empty text
 - i. Exposed filters
2. Features
- a. Why features?
 - b. Creating features
 - c. Conflicts
 - i. Inspecting
 - ii. Resolving
 - d. Recreating features
 - e. What you can feature
3. Exercise #6
- a. Creating a listing page for your content, including sorting by popular, latest content.
 - b. Packaging your configurations so that you can share your functionality with others.

Lesson 7: Migrations, operations, and installation profiles (4hrs)

1. Introduction to development, staging, and production environments.
2. Maintenance mode
3. Backup and migrate
 - a. Backing up
 - b. Restoring
 - c. Backing up to 3rd-party services
4. Site status and security updates
5. Recent log messages

6. Database updates
7. Introduction to command line
8. Introduction to Drush
9. Introduction to git
10. Exercise #7
 - a. Backup your Drupal website
 - b. Deploy it to production
 - c. Update 2 modules to the latest versions

Lesson 8: Advanced contrib modules Part 1 (4hrs)

1. Views Part 2
 - a. Contextual arguments
 - b. Relationships
 - c. Grouping
 - d. Exporting views
2. Views data export
3. Views bulk action
4. Views Slideshow
5. Panels Part 2
 - a. Access
 - b. Variants and selectors
 - c. Using views output for panels
 - d. Panels in panels
6. Exercise #7:
 - a. Add a slideshow to your front page

- b. Replace the content management admin interface with a custom one
- c. Create exportable reports for users and contents on your website

Lesson 9: Advanced contrib modules Part 2 (4hrs)

1. Rules
 - a. Reaction rules
 - b. Conditions
 - c. Variables
 - d. Actions
 - e. Components
 - f. Logical condition groups
 - g. Loops
2. Entity construction kit
 - a. Creating your own entities
3. Webforms
 - a. Creating webforms
 - b. Webform components
 - c. Display settings
 - d. Submission settings
 - e. Submissions
4. Exercise #9
 - a. Design a basic create-approve-publish workflow for your website and implement it using rules
 - b. Add a survey to your website.

Lesson 10: Installation profiles, ecommerce and communities (4hrs)

1. Installation profiles
 - a. Introduction
 - b. Publicly available profiles
 - c. Installing
2. The commerce kickstart installation profile
 - a. Components of a basic e-Commerce site
 - b. Creating products and product types
 - c. Accepting payments
 - d. Managing orders
3. The Open Atrium installation profile
 - a. Organic groups
 - b. Manage events
 - c. Social tools
 - d. Project management tools
4. Exercise #10: Try out both installation profiles