

IS 373 – Content Management Systems

Section: 001

CRN: 93784

Semester: Fall 2025

Credits: 3

Delivery Mode: Face-to-Face

Days/Times: Wednesday & Friday, 1:00 – 2:20 PM

Locations: CKB 106 (Wednesday), CKB 219 (Friday)

Instructor: Keith Williams

Instructor Information

- **Office:** GITC 3410
- **Email:** kwilliam@njit.edu (Discord preferred for quick responses)
- **Office Hours:** Wednesday & Friday 11:30 – 12:45, Tuesday & Friday 5:30 – 6:30 (by appointment)
- **Availability:** By appointment via Discord, email, or Zoom

Course Description

This course provides a critical, hands-on introduction to the design, implementation, and management of multi-user web-based content management systems (WCMS). The course examines the use of WCMS in businesses, non-profit organizations, news, and social media. Students gain hands-on experience with modern CMS platforms and apply the systems development life cycle to the creation of company intranets, corporate websites, social media, and news platforms. Core topics include top-down and bottom-up design, security, performance, web analytics, content strategy, and end-user support.

Prerequisites: None

Learning Outcomes

By the end of this course, students will be able to:

1. **Plan and Design** a multi-user CMS website with clear content strategy, information architecture, and user experience design.
2. **Develop and Manage** websites using **Drupal, WordPress, and Django** with best practices for modularity and maintainability.
3. **Implement Agile Teamwork**, including sprints, standups, collaboration in GitHub, and peer code reviews.
4. **Apply DevOps Practices**, including Docker containerization, automated testing, and CI/CD workflows.
5. **Ensure Quality and Integrity**, applying accessibility, copyright compliance, and privacy/security standards.
6. **Deploy and Maintain** CMS applications, integrating analytics and optimizing for performance and scalability.

Required Materials

- Instructor-provided resources (Canvas, Discord, GitHub repos)
- Students must bring their own laptop/device

Course Technologies

- HTML, CSS, JavaScript
- WordPress
- Drupal

- Django
- Docker
- Git and GitHub
- Figma (for UI/UX mockups)

Course Concepts

- CMS Project Planning & Management
- Agile and Lean Development for CMS projects
- Content Strategy and User Experience
- Security and Access Control in CMS
- Web Analytics and Performance Optimization
- Multi-User Administration and Collaboration

Course Format

- **Lectures + Hands-on labs** during each class
- Weekly **team-based activities** simulating Agile workflows
- Major **capstone project** integrating design, development, deployment
- **Discord** for real-time communication, **Canvas** for official assignments

Tentative Weekly Outline

- **Week 1:** Course intro, CMS landscape, project setup, Git/GitHub workflows
- **Week 2:** Content strategy, UX design, wireframes with Figma
- **Week 3:** WordPress basics: setup, plugins, themes
- **Week 4:** WordPress customization, security basics, group project kickoff
- **Week 5:** Drupal introduction and content modeling
- **Week 6:** Drupal modules, theming, permissions
- **Week 7:** Django for CMS development, MVC patterns
- **Week 8:** Midterm checkpoint & peer presentations
- **Week 9:** Authentication & authorization, user roles in CMS
- **Week 10:** Docker containerization for CMS deployment
- **Week 11:** CI/CD pipelines and automated testing in CMS workflows
- **Week 12:** Analytics, SEO, and performance optimization
- **Week 13:** Inclusive design: accessibility, i18n, responsive design
- **Week 14:** Capstone project build & presentations
- **Week 15:** Final integration, reflection, and course wrap-up

Grading

- **Assignments & Labs:** 50%
- **Midterm Project:** 25%
- **Final Project:** 25%
- **Extra Credit:** +3% possible (Collaboration Report)

Grading Scale

- A: 90–100
- B+: 86–89
- B: 80–85
- C+: 75–79
- C: 70–74
- D: 65–69
- F: 0–64

Policies

Late Work

- Homework: not accepted >2 days late without documentation
- Projects: –10% per day late, cutoff after 4 days

Attendance

- More than **3 unexcused absences = course failure**
- Excuses must be prearranged or documented

Incomplete Grades

- Only for serious documented medical/military reasons

Academic Integrity

- All work is subject to the **NJIT Honor Code**
- All commits must be authentic and documented
- Collaboration requires documentation in a **Collaboration Report**
- First violation: 0 on assignment; Second violation: F in course

NJIT Policy: [NJIT Academic Integrity Code](#)

University Statements

- **Disability Support Services (DSS):** Students requiring accommodations should contact DSS (Kupfrian Hall 201, dss@njit.edu).
- **Title IX:** Faculty must report gender-based discrimination or harassment. See [NJIT Title IX](#).
- **Emergency/Contingency Plan:** Instruction will continue online via Canvas and Zoom/Discord if campus is disrupted.

Instructional Philosophy

This course simulates a **real development job**:

- Projects may take **40+ hours**
- Agile teamwork matters as much as individual skill
- The focus is on **technical problem solving** and **confidence**
- You are preparing for **\$100k+ industry roles** — so the work will be demanding