CS 312 – System Administration


Credits: 4 Terms Offered:

Prerequisites: (CS 311 or CS344) and CS372

Unenforced Prerequisites: “or instructor approval”

Courses that require this as a prerequisite: None

Structure: Two 50-minute lectures per week and one 110-minute lab per week

Instructors: Benjamin Brewster

Course Content:
• Computers: hardware assembly and troubleshooting, operating system installation, booting, shutting down, user management, permissions, software troubleshooting, log files, backup methodologies, maintenance requirements and methods, registries and system files, and security.
• Networks: hardware, planning, installation, WANs & LANS, the Internet, troubleshooting, and security.
• Servers: hardware, user management, resource management, permissions, command and control, domains and groups, file systems, sharing files, system virtualization, remote management.
• Projects: Planning, estimates, client interaction and expectations, service level agreements, records management.

Learning Resources:
• Book: online resources

Measurable Student Learning Outcomes:
At the completion of the course, students will be able to:
1. Build a functioning general-purpose computer from scratch.
2. Demonstrate how to plan, install, and troubleshoot a Local Area Network, connecting it to a Wide Area Network.
3. Demonstrate how to manage a server for the purposes of providing specific services to a collection of users and devices, including manipulation of user accounts, resource management, and security.
4. Demonstrate how to maintain a collection of devices using remote management tools in both centralized locations and across de-centralized organizations.
5. Describe how to plan major and minor tasks and time so that services are stable and effective, and meet a Service Level Agreement.
6. Produce written documentation of system problems, solutions, processes, and procedures.
7. **Create** programs and demonstrate facility in programs and tools that automate system administration tasks.

8. **Participate** effectively in a team environment.

**Students with Disabilities:**
Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at [http://ds.oregonstate.edu](http://ds.oregonstate.edu). DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

**Link to Statement of Expectations for Student Conduct,** i.e., cheating policies [http://oregonstate.edu/studentconduct/offenses-0](http://oregonstate.edu/studentconduct/offenses-0)

Revised: Spring 2017