

ECT 424 Syllabus

Enterprise Infrastructure

Overview: Introduction to modern enterprise infrastructure and the evolving technology environment. Major topics include: computer networks, Internet infrastructure, Web 2.0, online collaboration, social media, content management, Enterprise 2.0, SAAS, cloud computing, and portals.

This is a survey class, so many topics will be covered and none will be covered to extreme depth. The intentions of this course include:

- To ensure working familiarity with modern IT technologies and terminology, making each of you conversant within the topics listed above
- To develop insight into the relationships among Internet technologies and the changing form of work in the 21st century

It is understood that some of you already have experience or expertise in specific subsets of the course material (and this is a challenge in teaching the course). The intention is to bring everyone up to speed on all of these topics to better enable you to excel in the MS program and in your future careers.

Prerequisite: None

Reading Material: There is no text to purchase. All reading and lecture assignments will be available in D2L Reading. Materials will be online articles and books in the DePaul Online Library.

Weekly Topics:

WEEK 1: Class overview, Introduction to Enterprise Infrastructure, Software Architecture, Zachman Framework, The Open Group Architecture Framework(TOGAF)

WEEK 2: Introduction to Networks. Basic networking components, software and hardware, including hubs, routers, bridges, gateways, switches, cables, wireless adapters, Ethernet, and Bluetooth. Introduction to network topologies, load balancing algorithms, failover and tiered design

WEEK 3: Introduction to Internet Infrastructure. ISPs, POPs and NAPs. Routers. The Internet Backbone. IPv4 and v6 addresses. Domains and subdomains. URLs. DNS servers. Web servers, email servers, and FTP servers. Ports. Internet protocols, including HTTP, FTP, SMTP, TCP/IP and SOAP. Packets. Firewalls. Caching. Cellular networks, 3G, 4G, WiMax and LTE

WEEK 4: Overview of Enterprise 2.0, the Internet of Things and Web. 2.0/3.0

WEEK 5 Mid-Term (Review Week 1-4 materials)

WEEK 6: Wikis, blogs, Social media and content management systems(CMS)

WEEK 7: Cloud computing, software as a service and network security

WEEK 8: Corporate portals and Supply Chain Infrastructure

WEEK 9: Web Services, SOA Architecture, and Mobile computing

WEEK 10: Mashups and rich Internet applications

WEEK 11: Final Exam (Review Week 6-10 materials)

Internet Platform: Every student is expected to secure an online hosting account. There are two and a half options for this: 1) you may be able to secure a FREE account (or the half is \$15 for custom site domain registration) account from Siteground using your DePaul provided email (more info on this in the Project

FAQ) or you may choose to purchase an account from Siteground or other approved provider which may run about \$30 for 1 year of hosting. If you already have a personal webhost account, it is possible that account will meet your needs. It is not permitted for students to share an account as one of the objectives of this requirement is to provide every student with the experience of managing such an environment herself/himself. This requirement will be discussed further in the initial class session, please WAIT before purchasing site hosting. You will be given the referral links to SiteGround.com in the first class period.

Online Learning Class: You will be required to participate in the course through a series of discussion topics and a couple of group activities (in-class). There will not be real-time Online access to this course although all class periods are recorded through D2L.

Assignments:

1. Web Project (20%) : Each student will be required to create and host a community CMS on their webhost account. This site will be built in WordPress or Joomla; students may propose an alternative platform if there is desire to learn something specific (although the support from the instructor may be limited). Specific design requirements will be provided for this assignment. Web Assignments 30%

2. Case Studies (25%): I will assign case studies for you to read and research. Each case study will have a series of questions for you to answer. Each case study must be answered within 1200-1500 words (2-3 pages).

3. Discussions (5%): All students are graded on their discussion participation and will also have the opportunity to participate in several group activities. Discussions 5%

4. Mid-Term (25%): Review of materials from Week 1 -4

5. Final exam (25%): Review of materials from Week 6-10

5% Participation-- Attendance, group work, and participation in class.

25% Case Studies

25% Mid-Term

25% Final Exam

20% Web Project

Final grades:

A 94-100

A- 89-93

B+ 85-88

B 80-84

B- 75-79

C+ 70-74

C 65-69

C- 60-64

D+ 55-59

D 50-54

F <50

Penalty for late submission of deliverables and assignments: one week late (-15%), two weeks late (-25%), three weeks late (0%).