SIT 223: Open Source Applications

Purpose of the course

The purpose of the course is to introduce students to the concepts of Open Source software, giving a brief history of the movement and examining current issues in development and use of open source software.

Expected Learning Outcomes of the Course

At the end of this course/unit, the learner should be able to:

i. Explain how the Open Source movement has arisen, what it is, how it works;
ii. Describe some of the recent contributions made by open source approaches;
iii. Demonstrate skills in the use of the GNU/Linux operating system including editing tools, libraries and utilities;
iv. Use the concurrent versions system in the management of software projects;

Course Content

Open Standards. Open Source Software. Open Source Licensing. Open source adoption challenges. Assessment. Stages of a deployment project. Purpose of assessment stage. Risk Identification. Java EE application migrations. Java EE application assessment. Integration with existing systems. History of Linux: review of previous studies in Linux/Unix. GNU/Linux utilities: vi, sed, tr, grep, awk, cut, etc. Installation of applications: binaries, source code, package managers; the Concurrent Versions System. Open Source applications. Software development using Open Source methodologies and tools.

Mode of Delivery

Use of lectures
Tutorials
Lab exercises

Instructional Materials and/or Equipment

Projectors
White boards
Marker pens
Computers with Java, C++ compilers

Course Assessment

Continuous Assessment	30%	
End of Semester Examination	70%	
Total	100%	

Core Reading Materials for the Course

i. Information Resources Management Association. (2015). Open source technology: Concepts, methodologies, tools, and applications. Hershey, PA : Information Science Reference
ii. Armstrong. (2013). *The performance of open source applications: Speed precision, and a bit of serendipity*. Lexington

iii.   Deek, F. P., & McHugh, J. A. (2008). Open source: Technology and policy. Cambridge: Cambridge University Press.

iv.   Feller, J.; Fitzgerald, B.; Scacchi, W.; Sillitti, A. (Eds.) (2007). *Open Source Development, Adoption and Innovation* Springer.

Recommended Reference Materials

i.   Coombs, K. A., & Hollister, A. J. (2014). Open Source Web Applications for Libraries. Medford: Information Today, Inc.

ii.   Ron Goldman and Richard P. Gabriel, Morgan Kaufmann, (2005). *Innovation Happens Elsewhere - Open Source as Business Strategy*, b, Publisher, ISBN: 1558608893.