COURSE SYLLABUS

INFO 5002: Introduction to Python for Information System, Spring 2023

Instructor:	Professor Pramod Gupta
Classroom:	Silicon Valley –2nd Street 1045
Schedule:	Lectures at 10pm GMT-8 on Wednesday and Friday
Contact:	Professor Pramod Gupta - p.gupta@northeastern.edu
TA:	Raj Sudharshan – lvidyalathanataraja.r@northeastern.edu

Course Aims

The primary objectives of this course are to introduce software engineering techniques and their application to real-world business problems. Students will be equipped with practical design and programming techniques for the purpose of modelling significant business applications quickly. In a step-by-step manner, the instructor will take you through the process of systematically combining object-oriented programming techniques, business processes, and complex data models to assemble models that are user friendly and meet business requirements. You will learn how to employ systems thinking, the object-oriented paradigm, the visual Programming technique, as well as productivity tools to put together complicated, powerful designs. We will practice simple and smart ways of making software programming enjoyable.

Course Outcomes

Students will learn how to build models that represent the full functionality of software applications. The modularity principle will be used to build powerful models that lend themselves to specifications for software implementation. In addition, the student will learn basic programming techniques to prepare them for INFO 5100 and other technical courses. Overall, the class will teach the students how to be a functional architect and take the lead in using software to drive innovative solutions to business problems, in healthcare, financial, as well as other social challenges.

Tools

The class will use Jupyter Notebook for programming.

Tentative Schedule of the Course

Lecture		**Topic/Activity**	**Type**
Lecture 1		Introduction to the course	Lecture
Lecture 2			Lecture
Lecture 3		Application Architectures	Lecture
Lecture 4		Modeling the supply-side	Lecture
Lecture 5		Principle of socio-technical engineering	Lecture
Lecture 6		University Model	Lecture
Lecture 7		Digital Marketing cases	Lecture
Lecture 8		Healthcare case studies	Lecture
		Final Project Announcement	Final Project
		Mid-term exam	Exam
Lecture 9		Advanced Design Techniques	Lecture
Lecture 10		Advanced Design techniques part II	Final Project
Lecture 11		Final Project Status Check	Lecture
Lecture 12		Case Studies	Lecture
Lecture 12		Final Project Status Check	Final Project
Lecture 13		Final Project Submission	
Lecture 14		Final Project Presentation	

Grading

Coursework will be weighted as follows:

Name	**Percentage**
Assignment and Lab	40%
Class Participation	10%
Spot Attendance	10%
Final Project	40%

Plagiarism Policy

When there is evidence that a student has committed plagiarism, copied the work of others, allowed others to copy their work, cheated on an exam, altered class material or scores, or has inappropriate possession of exams, or sensitive material, the incident will be investigated. The consequences for academic dishonesty are severe and that will include a straight F in the course with the potential for dismissal.