21ES601 Embedded System Programming

Sarath T.V

Syllabus

- Version control system, benefits, Types of Version Control Systems, Centralized Version Control Systems, Distributed Version Control Systems. Coding standard and guidelines. Code documentation. Functions, Pointers, Structure, Data Structures- Stacks and Queues, Linked List.

- Introduction to Object oriented design pattern. Basic elements, mutable and immutable type, tuples, list, and dictionaries. Control statements, loops, Functions, modules, Exception and assertions. Classes, Access Modifiers, dunder/magic methods, object-oriented programming, abstraction, inheritance, encapsulation, polymorphism, Code testing.

- Porting to microcontrollers, Code Analysis and Performance tuning

Course outcome

Understand the basics of version control system and documentation.

Develop structured programming using C.

Develop code using object-oriented concepts.

Analyse programs for real world applications.

TEXTBOOKS/REFERENCES

1. Jon Loeliger, Matthew McCullough,*"Version Control with Git"*, O'Reilly Media, Inc 2nd Edition,2012

2. Zed A. Shaw, *"Learn Python 3 the Hard Way",* Addison-Wesley, 2016

3. Robert Martins, *"Clean Code" ,* Pearson Education, second edition,2012

4. Xavier Rival and Kwangkeun Yi , *"Introduction to Static Analysis an Abstract Interpretation Perspective"*, MIT Press, January 2020

Evaluation Pattern

- Lab based course

Internal :External	Mid Term online exam	Mid Term viva	Continuous Assessment Theory	Continuous Assessment LAB	End semester Online	End semester viva
70:30	10	10	10	40	10	20
	20		50		30	

All the best !!!!