Course Number	CS 501	Course Title	Advanced Computer Architecture
Semester Hours	3	Course Coordinator FA20	Chun-Hsi Huang
Catalog Description	Hardware and software elements of multiprocessors, multicomputers, pipeline and array machines, data flow architecture, and other state-of-the-art architectures. Design principles related to machine structures, interconnection networks, control software and hardware, data storage and access.		

Textbooks

References

Course Learning Outcomes

Assessment of the Contribution to Student Outcomes

Outcome →	1	2	3	4	5	6	7
Assessed →	X	X	X		X		

Prerequisites by Topic

CS 401

Major Topics Covered in the Course

1. Classification of parallel machines {3 classes}

2. Interconnection networks {8 classes}

3. Multiprocessor architectures {6 classes}

4. Multicomputer architectures {6 classes}

5. Array processors {3 classes}

6. Hybrid architectures {3 classes}

7. Parallelism detection and parallel compilers {3 classes}

8. Special purpose systems {4 classes}

9. State-of-the-art architectures {2 classes}

10. Future directions of parallel and distributed architectures {2 classes}

Latest Revision: Spring 2021