Course Information	
Course title	Multimedia System-on-chip Design
Semester	109-1
Designated for	COLLEGE OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE GRADUATE INSTITUTE OF ELECTRICAL ENGINEERING
Instructor	SHAO-YI CHIEN
Curriculum Number	EEE5029
Curriculum Identity Number	943 U0310
Credits	3.0

Course Syllabus

Course Description	HERE IS THE OUTLINE OF THIS COURSE: 1. INTRODUCTION TO SOC/ESL/MULTIMEDIA SYSTEMS 2. SYSTEMC TUTORIAL 3. PLATFORM-BASED DESIGN/INTRODUCTION TO SYSTEM DESIGN FLOW 4. PROCESSORS 5. PERIPHERALS AND INTERFACING 6. MIDTERM EXAM 7. OPERATION SYSTEMS 8. MEMORY 9. MULTIMEDIA APPLICATION PROCESSOR DESIGN (INVITED TALK) 10. MULTIMEDIA HARDWARE ACCELERATORS 11. SOC VERIFICATION 12. FINAL PROJECT PRESENTATION SEVERAL LABS ARE ALSO INCLUDED IN THIS COURSE AS FOLLOWS: LAB 1: SYSTEM C BASIC AND TLM LAB 2: ARM ADS LAB 3: CONVERGENSC LAB 4: PERFORMANCE EVALUATION AND SIMULATION WITH VERILOG MODULE

	LAB 5: EMULATION SYSTEMS (FORTELINK/ARM VERSATILE)
References	HANDOUT OF THE COURSE. K. K. PARHI AND T. NISHITANI ED., DIGITAL SIGNAL PROCESSING FOR MULTIMEDIA SYSTEMS, MARCEL DEKKER, 1999. K. K. PARHI, VLSI DIGITAL SINGLA PROCESSING SYSTEMS: DESIGN AND IMPLEMENTATION, JOHN WILEY AND SONS, INC., 1999. L. WANHAMMAR, DSP INTEGRATED CIRCUITS, ACADEMIC PRESS, 1999. F. VAHID AND T. GIVARGIS, EMBEDDED SYSTEM DESIGN: A UNIFIED HARDWARE/SOFTWARE INTRODUCTION, JOHN WILEY AND SONS, INC., 2002. T. GROTKER, S. LIAO, G. MARTIN, AND S. SWAN, SYSTEM DESIGN WITH SYSTEMC, KLUWAR ACADEMIC PUBLISHERS, 2002. M. KEATING AND P. BRICAUD, REUSE METHEDOLOGY MANUAL, 3RD ED., KLUWER ACADEMIC PUBLISHERS, 2002. G. MARTIN AND H. CHANG ED., WINING THE SOC REVOLUTION, KLUWER ACADEMIC PUBLISHERS, 2003. J. BHASKER, A SYSTEMC PREMIER, STAR GALAXY PUBLISHING, 2004. STC/ITRI, IC DESIGN IN SYSTEMC CIC, COWARE CONVERGENSC TRAINING MATERIAL S&IP CONSORTIUM, INTRODUCTION TO DIP DESIGN S&IP CONSORTIUM, DIP DESIGN PROJECTS