

CMPE 691x: Design for Manufacturability

Catalog description: Yield loss due to random and systematic process variations and systematic defects is increasing as technologies are aggressively scaled. To deal with these issues, design-for-manufacturability (DFM) practices are increasingly applied at higher levels of the design flow because techniques such as optical proximity correction are no longer sufficient. Today, DFM practices are applied during standard cell library development and are integrated into DFM-aware detailed routing tools. The integration of DFM into higher levels of the design process enable optimization engines to consider yield in addition to area, power and timing. This course will cover topics related to the current state-of-the-art in design for manufacturability.

Semesters offered: Fall 2008

Course prerequisites: CMPE 315 (Principles of VLSI Design) or CMPE 640 (Advanced VLSI Design)

Level: Graduate

Credits: 3

Class times: 2.5 hours of lectures per week.

Text: Design for Manufacturability and Statistical Design: A Constructive Approach, Michael Orshansky, Sani Nassif, Duane Boning, 2008, ISBN# 978-0-387-30928-6, Publisher: Springer

Grading:

Midterm	20%
Final	30%
Labs	25%
Homeworks/Project	20%
Class Participation	5%