**NE - Nanoengineering**

**Nanoengineering: NE**

**Lower-Division Courses**

**Upper-Division Courses**

**Graduate Courses**

**NE 380. Introduction to Nanoengineering.**
Restricted to nanoengineering majors. Survey fundamental and important areas in nanoengineering including semiconductor device design, semiconductor manufacturing techniques, metrology and process control. Three lecture hours a week for one semester
Prerequisite: Graduate standing.

**NE 380C. Topics in Nanoengineering.**
May be repeated for credit when the topics vary.

**NE 381. Nanofabrication.**
Restricted to nanoengineering majors. Explore a theoretical and practical introduction to contemporary nanofabrication techniques and methods. Three lecture hours a week for one semester Prerequisite: Graduate standing.

**NE 382. Nanodevices.**
Restricted to nanoengineering majors. Examine the design and physics underlying modern semiconductor devices. Three lecture hours a week for one semester. Prerequisite: Graduate standing.

**NE 390. Nanofabrication Laboratory.**
Restricted to nanoengineering majors. Explore how to operate nanofabrication tools in the cleanroom. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

**NE 391. Nanometrology Laboratory.**
Restricted to nanoengineering majors. Explore various different metrology techniques for analyzing nanoscale materials and structures. One lecture hour and three laboratory hours a week for one semester. Prerequisite: Graduate standing.

**NE 395. Introduction to Nanoengineering Research.**
Restricted to nanoengineering majors. Prepare for an independent research project in nanoengineering through developing literature review and technical writing skills. Three hours of lecture a week for one semester. Prerequisite: Graduate standing.

**NE 398R. Master’s Report.**
Restricted to nanoengineering majors. Prepare a report to fulfill the requirement for the master’s degree. Three hours of lecture a week for one semester. Prerequisite: Graduate standing.

**Professional Courses**