Kursnamn Vacuum Technology
Name of course

Omfattning (högskolepoäng) 7,5
ECTS credits

Tidsperiod HT14
Course period

Antal platser 30
Maximum number of participants

Undervisningsspråk English
Language of instruction

Kursens syfte samt motivering till varför den bör vara fakultetsgemensam (max 150 ord)
Aim of course and motivation as to why it should be considered “multidisciplinary” to the extent that the faculty should allocate extra financing.

The aim of the course is to give basic theoretical and practical knowledge of vacuum technology and the equipment that is used in vacuum- and thin film technology. Vacuum processing equipment is necessary in various technological fields like physics, chemistry, materials science, electronics and nano technology. Moreover vacuum equipment is used to characterize and analyse samples from an even larger scientific sphere. To be able to use the vacuum based tools in an adequate way, one has to have an understanding of vacuum and related issues such as pressure measurement, pumping mechanisms and pumping speed, monolayer formation time, mean free path etc.

Kursinnehåll, kursens uppläggningsform samt examinationsform (max 150 ord)
Contents, study format and form of examination

The lectures will focus on the following subjects: Definition of pressure and how it can be measured, the different gas flow regimes, the materials used in vacuum equipment, different vacuum pumps and manometers, construction of vacuum systems, and residual gas analysis. At the end of the course there will be a written examination.

Målgrupp(er) (specifera ämnen/inriktningar) samt rekommenderade förkunskaper
Target group/s (specify, if possible, subject/specialization) and recommended background
Graduate students active in the field of material science, thin film technology, chemistry, physics or other fields related to vacuum technology.

Huvudansvarig institution Institutionen för teknikvetenskaper
Department with main responsibility

Andra inblandade institutioner (specifiera hur).
Other departments involved (specify how).

Kontaktperson(er) (namn, e-postadress)
Contact person (name, e-mail address)
Tomas Nyberg, Solid State Electronics, Ångström Laboratory, e-mail: tomas.nyberg@angstrom.uu.se
Application from course participants should be sent to
Tomas Nyberg, Box 534 Ångström Laboratory, 751 21 Uppsala or e-mail to
tomas.nyberg@angstrom.uu.se

Not later than

Senast 2014-09-30