1	Department proposing the course	Chemistry
2	Course Title	Molecules to Materials
3	Course Number	CYL 725
4	Course Structure	3-0-0
5	Credits	3
6	Prerequisites	None
7	Course Objective	This course introduces the regime between the well known molecular domain sought after by the chemists and the solid state chiefly looked after by the physicists

8 **Lecture Outline**

	Topic	***Number of hours***
a	Introduction to nanoscience	3
b	Nanotools	4
c	Fabrication methods	3
d	The physics behind nanomaterials	4
e	Chemistry of nanomaterials	4
f	Chemical interactions	3
g	Supramolecular chemistry	4
h	Nanoscience in nature	3

i Students need to choose a topic relevant to the course and give a 45 minute presentation. Additional 15 minutes are reserved for discussions.

9 **Suggested Reading**

a Introduction to Nanoscience & Nanotechnology
Hornyak, Tibbals, Dutta and Moore

b Nanoparticles
Ed. G. Schmid

c Supramolecular Chemistry
Steed and Atwood

d Physics and Chemistry of Nanosolids
Owens and Poole

e Recent journal articles

10 **Grading**

Minor 1	20%
Minor 2	20%
Major	40%
Presentation (content, clarity, answering and asking questions will be given equal weightage)	20%