

BE 7909: Food nanotechnology: a focus on delivery systems

Description: The impact of nanotechnology on the food sector is expected to be significant. The impact of nanotechnology on the food sector is expected to be significant as

quality and safety of food products. The impact of nanotechnology on the food sector is expected to be significant as

researchers and industry experts. The first wave of nanotech applications in foods has focused on enhanced taste and bioavailability of bioactives. Controlled release, targeted delivery, bioavailability, functional ingredients, and enhanced nutritional value are some of the key areas. Synthesis and characterization of polymeric nanoparticles, effect of size on cellular and in vivo interaction and toxicity of nanoparticles, as well as applications of nanoparticles and colloidal

combination of lectures, and individual projects and presentations.

Text books: none

Instructors: Cristina Sabliov and guest speakers

Guest lectures provided by Astete (BAE), Hayes (BAE) and Morgan (VetSchool)

Contact info: Cristina M. Sabliov

141 E. B. Doran Bldg.

225-578-1055

csabliov@lsu.edu

Instruction provided by the following topics

Week 1 (Jan 16-20): Introduction to the topic, importance, and applications (Sabliov)

Week 2 (Jan 22-27): Surface-active colloidal emulsions and colloidal stability (Sabliov)

colorant solubility and improved vitamin bioavailability (Sabliov)

Week 6 (Feb 20-24): Mardi Gras

Week 7 (Feb 27-March 2): Palmaricin pro-canceric on cell lines for improved nutritional

(Sabliov)

NOTE: MIDTERM PAPER DUE MARCH 2 at 4:30 pm

(Sabliov and Guest: Tim Morgan)

Week 10 (April 10-13): Nanotechnology in food packaging (Sabliov)

Week 11 (March 26-30): Time dedicated to report development

Week 12 (April 7-11): Time dedicated to report development

Week 14 (April 16-20): Student presentations

Week 15 (April 23-27): Student presentations

Week 16 (April 30-May 4): Student presentations

NOTE: FINAL PAPER DUE MAY 5 at 4:30 pm

Projects

- You will write a report on the synthesis, characterization and application of polymeric presentation).
- The final report (20-pg single space) will provide your methodology and expected results, in
- The in-class presentation will summarize the findings presented in the report.

Academic Integrity

Students are expected to comply with the Code of Student Conduct throughout this course. For your information, the Code of Student Conduct can be found at

[http://appl003.lsu.edu/slas/judicialaffairs.nsf/\\$Content/Code+of+Student+Conduct?OpenDocument](http://appl003.lsu.edu/slas/judicialaffairs.nsf/$Content/Code+of+Student+Conduct?OpenDocument)

Grading policy: Grades will be determined based on the project and class presentation:

Midterm paper (30%), Final paper (60%), Class presentation (10%)