MEETING LOCATION
The short course will be held at:
Dept. of Food, Bioprocessing & Nutrition Sciences
(Schaub Hall)
North Carolina State University
400 Dan Allen Dr.
Raleigh, NC 27607
Phone: 919-515-2957
http://www.ncsu.edu/foodscience

The building (Schaub Hall) is at the corner of Dan Allen Dr. & Sullivan Dr. on the NC State University campus.

The closest airport is the Raleigh-Durham Airport (RDU). It is approximately 13 miles from NC State University.

NEARBY HOTELS

1. Holiday Inn: 919-828-0811 (1.5 miles away)
   1707 Hillsborough St., Raleigh, NC 27605
2. Clarion Hotel: 919-832-0501 (2.5 miles away)
   320 Hillsborough St., Raleigh, NC 27603
3. Holiday Inn Express: 919-854-0001 (3 miles away)
   3741 Thistledown Dr., Raleigh, NC 27606
4. Days Inn: 919-828-9081 (3 miles away)
   300 N. Dawson St., Raleigh, NC 27603
5. Ramada Inn: 919-832-4100 (3 miles away)
   1520 Blue Ridge Rd., Raleigh, NC 27607
6. Sheraton: 919-834-9900 (3 miles away)
   421 S. Salisbury St., Raleigh, NC 27601
7. Raleigh Marriott City Center: 919-833-1120 (3 miles)
   434 Fayetteville St. Mall, Raleigh, NC 27601
8. Comfort Suites: 919-854-0502 (4 miles away)
   1200 Hurricane Alley way, Raleigh, NC 27607
9. Hampton Inn & Suites: 919-233-1798 (5 miles away)
   111 Hampton Woods Lane, Raleigh, NC 27607
10. Candlewood Suites: 919-468-4222 (5 miles away)
    1020 Buck Jones Rd, Raleigh, NC 27606

SHORT COURSE DETAILS
This short course is intended for people from the food industry and academia who want to explore the potential uses of TD-NMR technology for their products, processes, and applications (compositional analysis, quality control, research & development, and safety aspects). This one-and a half day course will provide theoretical as well as hands-on knowledge on TD-NMR and its application towards rapid quantitative monitoring of food products and processes in terms of physico-chemical properties, sensorial attributes, and spoilage (chemical/microbial). The course will comprise of lectures on fundamental principles of TD-NMR and its wide range of applications (fats, oils, chocolates, sugars, cereals, grains, baking, multi-component foods, emulsion-based foods) in the food industry, provided by renowned experts from academia and industry. The course will provide ample opportunity to receive hands-on experience with TD-NMR instruments to see the technology in action.
**PROGRAM**

**Tuesday (May 10, 2011)**

7:30 to 8:00  Registration & Breakfast
8:00 to 8:15  Welcome & Introductions (Sandeep)
8:15 to 9:15  Fundamentals of TD-NMR (Ghosh)
9:15 to 10:00 TD-NMR instrumentation (Ghosh)
10:00 to 10:15 BREAK
10:15 to 10:45 Structure, composition, and mobility of water: Theory (Ruan)
10:45 to 11:00 Structure, composition, and mobility of water: Applications (Stevenson)
11:00 to 11:30 Analysis of glass transition (Ruan)
11:30 to 12:00 Determination of composition of foods (Sandeep)
12:00 to 1:00 LUNCH
1:00 to 1:30  NMR imaging (Pan)
1:30 to 2:00  Applications to fats and oils (Tombokan)
2:00 to 2:30  Applications to chocolates and sugars (Ghosh)
2:30 to 3:00  Applications to cereals, grains, and baking (Ghosh)
3:00 to 3:15  BREAK
3:15 to 3:45  Applications to multi-component and emulsion-based foods (Campbell)
3:45 to 4:00  In package analysis of foods (Ghosh)
4:00 to 4:30  Can we use TD-NMR to predict sensory responses? (Martini)
4:30 to 5:00  Prediction of food spoilage (Ghosh)
6:30 to 9:30  RECEPTION & DINNER

**Wednesday (May 11, 2011)**

7:30 to 8:00  Continental Breakfast
8:00 to 12:00 Hands-on Experimentation with Bruker Equipment ([http://www.brukeroptics.com](http://www.brukeroptics.com))
12:00 to 1:00 LUNCH

**REGISTRATION**

Name: ______________________________
Organization: ________________________
Address: ____________________________
Phone:  ____________________________
E-Mail:  ____________________________

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No REFUNDS on cancellations after Feb. 10.

Mail Registration Form to:
Dr. K.P. Sandeep
129 Schaub Hall
Dept. of Food, Bioprocessing & Nutrition Sciences
North Carolina State University
Raleigh, NC 27695

Checks should be made payable to “North Carolina State University”

**Disclaimer:** Under extenuating circumstances, we may have to make changes in times, topics, and speakers

For More Information, Contact:
Dr. K.P. Sandeep
Email: kp_sandeep@ncsu.edu
Phone: 919-515-2957

Dr. Supriyo Ghosh
E-mail: supriyo.ghosh@brukeroptics.com
Phone: 978-439-9989; Ext. 6127