**Professional Development Seminar: Research Ethics Speaker** (Speaker: Director for Engineering Outreach, College of Engineering and Applied Science and Professor, Department of Biomedical, Chemical and Environmental Engineering; Date: July 7; Time: 1:00– 2:30 PM)

This session was presented by Dr. Anant Kukreti. Dr. Kukreti is Director for Engineering Outreach for the College of Engineering and Applied Science and Professor in the Department of Biomedical, Chemical and Environmental Engineering. He joined UC in August 2000 as the Head of the Department of Civil and Environmental Engineering (CEE). The topic of this Professional Development Seminar was Ethics in Research, with a special focus on its importance and application in research reports. Dr. Kukreti explained three major things: First, why ethics are important and ethical decisions seen while conducting research. Secondly, what one can do to avoid being unethical in decision-making. Last but not least, the tricky role of human subject protection during research.

Before getting into the issue of how ethics can be properly handled in the lab and research environment, Dr. Kukreti went into detail about how it is crucial to understand why ethics are important in such setting and how they can be seen in research. Ethics are present in labs in multiple ways, ranging from bias towards a researcher’s own or a friend’s work, to burying results, to skewing a researcher’s data in a certain way. Often times a researcher or program head will be on a board that reviews proposals for new research. At times, a proposal will come through which is recognized by the board member as a friend or close colleague. This will bring up the issue of bias towards personal friends, often times a judge will give favor to their colleague over others as they go into it with a bias. This is unethical, as all proposals should be looked at equally without a bias. Unethical decision-making can also pose a threat in situations where money or reputation is involved. In situations such as these, skewing or leaving out data often occurs. A researcher should always record and report every piece of data they measure, whether it agrees or disagrees with their work. However, when a researcher wants to be correct in their findings or has money offered for future products based on their findings, some skew or leave out data that isn’t satisfactory to their goal. Situations such as these place a lot of responsibility on the researcher as they have a decision of whether or not to be ethical.

Dr. Kukreti explained that the issues found in research fall into the two broad categories of misconduct and unethical behavior. Misconduct consists of selecting data or falsifying data for the personal gain of the researcher or the institution that they represent. In this type of infraction, the individual is often punished in one of two ways. It either occurs as punishment in the legal system or punishment in the job field. An honest error would not be classified as misconduct, because the individual must be intentionally aiming to deceive. As a preventative measure, it is very important to keep log books in research because they are a great resource to reference in the future. On the other hand, in infractions classified as unethical behavior, not every incidence is punishable. Having errors is not unethical, but the failure to report them is unethical. Unethical behavior is not always classified as misconduct, but rather it involves acts that compromise integrity and / or fairness.

Dr. Kukreti really focused on the importance of Human Subject and Animal Care/Protection. In research involving human subjects, individuals must be fully informed of the details of all processes and procedures and the highest level of precaution must be taken to ensure their safety and wellbeing. He also made sure to point out that gray areas still exist in the ethics of research; not everything is black and white. As a precaution, always be sure to disclose all details of the research, choose the most fair situations, know the rules (or ask), and keep good records!