**Technical Writing and Presentation Workshop** (Speaker: Dr. Anant Kukreti, Director for Engineering Outreach, UC, CEAS; June 24, 2015, 10:45 am–12:00pm)

Dr. Anant Kukreti is Director for Engineering Outreach for the CEAS, and Professor in the Department of BCEE, CEAS, UC. He joined UC in August, 2000 as Head of the Department of Civil and Environmental Engineering (CEE) and before that worked for 22 years at University of Oklahoma, Norman, Oklahoma. After serving as the Department Head of CEE he was appointed as the Associate Dean for Engineering Education and Research in the College of Engineering and Applied Science in which capacity he served until August 2009. He teaches structural mechanics, with research in steel structures, seismic analysis and design, and engineering education. He has won five major university teaching awards, two Professorships, two national ASEE teaching awards, and is internationally recognized in his primary research field. He has extensive administrative experience in managing major NSF grants, which includes the ongoing $9 Million Math and Science Partnership grant, a $2 Million STEP grant, a $600,000 S-STEM grant, a $300,000 REU grant, and a $500,000 RET grant. He is also coordinating a $4.3 Million Choose Ohio First Scholarship grant from the Ohio Board of Regents.

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| **Figure 1: Dr. Kukreti Addressing the RET Teachers** | **Figure 2: RET Teachers Engaged in Technical Writing Seminar** |

Dr. Kukreti began the session by introducing himself (see Bio above) and then discussing the background and history of the RET program. Dr. Kukreti stated that this was one of 10 RET programs in the country. Each RET teacher provided a brief background including their school, subject taught and a brief statement regarding what the member hoped to get out of the RET program. Additional discussion centered on the EDP process and its relationship to the Next Generation of Science Standards; how EDP and scientific method were different and the use of the research portion of the program to provide real world application.

Also discussed was what the EDP process could look like in the classroom. Visions provided from the member included that it would encourage free thinking, allow for multiple correct answers, focus on main ideas, require critical thinking, enhance problem solving, and force students to use communication skills. Another key element of EDP in the classroom is the refining stage of the process which is anticipated to be an important addition, often overlooked in projects.

The main topic of the session was to discuss Technical writing. The three particular items which will be impacted by the technical writing include the Research Report and Unit, the NSF report and the Workshop Summaries. Each should be treated as a technical report which will include specific formatting (Titles, Header, review requirements). Formatting for the Research Report and Unit is provided in the RET Summer 2015 Binder under the General Information tab. A hand out was also provided for the NSF Report which was described as a summary version of the Research Report and Unit. The group was directed to look over the “General Instructions for Preparing RET Team Project Report” in their binders.

1. For the NSF report, Dr. Kukreti provided the following formatting instructions: General formatting: Items 2-9 listed below should be 4-5 pages (not to exceed 5 pages). Use Arial 10 font, 1 inch margins, and 1 blank space between paragraphs, headers and text. Page numbering bottom center.
2. Abstract should be same as the Research Report and Unit.
3. Goals/Objectives: objectives are the tasks which accomplish the goal.
4. Literature Review should be abbreviated from the Research Report using only key references
5. Research task should state objectives and may provide time lines.
6. Methodology describes how research was conducted.
7. Training received was training provided by RET member to conduct research.
8. Research findings would be the results of the research
9. Classroom implementation would include two paragraphs (one for each teacher member) in narrative form on how the experience will be incorporated into the classroom.
10. Bibliography should be included on a new page.
11. Appendix should start on a new page and each section of the appendix should start a new page.
    1. Project pictures should be included. (minimum 4)
    2. Assigned Seminar and research summaries should be attached.
    3. Each teacher’s instructional units are to be attached.

Dr. Kukreti provided specific discussion on some of the critical areas of the Research Report and Unit but did not review all parts of the paper. Key items included being sure to follow the formatting requirements including fonts, headers, and spacing. Be cautious regarding variable descriptions by using the Nomenclature section. The Abstract section is to include between 150-200 words. The bulleted items regarding the Abstract in the handout were to be considered suggestions and are not hard and fast. The last note emphasized - be sure ***not to use first person*** in the reports.