NET399/499 Capstone Report Guidelines

Student Name________________________________________

Please check-off and submit along with final project report.

☐ An individually written detailed report, approximately 10 pages for BS students, and 7 pages for AAS students in length, excluding title and appendices, is to be submitted. It should include appropriate bibliographical references, in American Psychological Association (APA) format is required.

☐ In general your project should have the following organization:
  □ Title page – project title, name, course, date, department, and institution
  □ Table of contents – include page numbers for various sections of the report
  □ Executive summary or abstract – Summarize in a paragraph or so, the technical problem and your proposed solution. Include a heading ‘Keywords’ and list 3-5 keywords related to your project.
  □ Introduction – Indicate the general technical area the problem being solved is set in. Discuss your motivation for undertaking the project. Refer to any relevant background information obtained from your list of references over here. Include applications from industry where similar ideas are being used or which prompted your design; also list alternate designs you considered initially, emphasizing the design which was finally chosen. Use illustrations liberally. If possible illustrate with a sample example, which indicates the necessity of addressing a specific technical problem. Use APA citation for references used indicating the ideas which influenced your project. Provide proper citations for any figures taken from other sources, including those taken from the Web.
  □ Problem Statement – Specifics of the technical problem your project is trying to solve. Include assumptions, and the conditions under which your design is supposed to function (in-scope specifications).
  □ Design – include your suggested final design with detailed illustrations, circuit diagrams, and the principle of operation of the system. It should also contain a block diagram of your system showing how the different parts of the system are linked together. The design section may contain subsections for the major blocks or tasks that need to be completed. This is the main part of the paper and be as detailed as possible without including any trivial information. If special testing procedures or equipment is needed make a note of it here as well. Include a project schedule, listing the major blocks (tasks) and sub-tasks that had to be completed, designating key tasks as project milestones, along with a schedule of how long each task took to complete. You may compare the anticipated and actual time needed for reaching each project milestone.
☐ Implementation – indicate whether the completed project meets and/or exceeds the in-scope specifications the project. Include a subsection for operational testing, with the procedures used to determine whether it conforms to the specifications. Also, include information about any technical problems which arose during the course of the project, as well as how you solved them. Offer possible explanations for any portion of the project which did not work as planned. Identify whether the crucial sections of the design are functioning as specified, and which sections required troubleshooting. Indicate which part of the design was the hardest and which how closely did your actual implementation follow the schedule. If needed include a subsection on simulation and calculated results, along with any graphs or tables showing the trends observed. Include simulation and/or calculated results, along with any graphs or tables showing the trends observed. Include digital photograph(s) of the project and refer to it within this section.

☐ Conclusions – Summarize the status of the project. State whether the completed project meets the in-scope specifications and project objectives. Provide suitable explanation for any sections which are not fully functional. Compare the working project to similar commercially available systems. Are there any key findings or implications which can be useful in extending its functionality further? Reiterate how your project solves the stated problem noting its significance.

☐ References – A bibliography section listing appropriate technical references (at least 5 for AAS and at least 10 for BS students) in APA format.

☐ Appendices – Include any manufacturer datasheets, detailed program code, ‘HOWTO’ (a step-by-step procedure), oscilloscope plots, program code, list of the materials and equipment used as applicable. Label the appendices A, B, etc.

☐ Spell-check your report. Possibly have a friend or family member read over your paper for typographical errors, and overall organization.

☐ A special note on using of text from web sources – please make every attempt to paraphrase the author rather than quoting verbatim. While it is tempting to cut-and-paste information from outside sources please refrain from doing so, except while using appropriate citations. Any images used should include appropriate citations.

☐ If the project involves ideas which could be of benefit to a wider technical audience consider publishing your paper or participating in a national conference, such as ATMAE (Association of Technology, Management, and Applied Engineering) formerly NAIT (National Association of Industrial Technology). This will be helpful for students later seeking admission to graduate school. We will be glad to work with you on any such endeavor. Such local, regional and nation presentation puts our department in the spotlight.