field of study Specific Guidelines

System/Network administration

System/Network Administration based projects must be real projects (no hypothetical projects) that can be documented. The proposed project and solutions the student develop do not have to be adopted by the customer. However, the student must have, at a minimum, a properly documented plan for the proposed solution showing the potential improvements (e.g. bandwidth, speed, security, compliance, etc.), all test plans, implementation plans and redundancy plans as appropriate.

Proposals must include

1. Overview of project problem should be done in layman’s terms (so that faculty not involved in networking/system administration can understand and evaluate the project). This should only be in the executive summary and the introduction. The technical plan should contain the detailed technical information, using appropriate terminology.
2. Written approval from the company/entity where the project is being performed. Approval must be by someone who is of a sufficient level that they are able to approve not only the project but any associated expenditures that would arise from implementing the improvements.
3. List of tools and methods to be used for implementation as well as system testing/acceptance.
4. A discussion of the skills (classes) currently in the student’s arsenal and a plan for how missing skills will be obtained in order to complete the project. This includes a demonstrable understanding of the technologies (e.g. routers, testing software, operating systems, etc.), operations and processes that will be under review.

The following are the typical minimum final report requirements for a System/Network Administration project:

1. Full description of current problem and need for improvement
   1. “Current state” schematic/network diagram
   2. Information on current state system weaknesses, along with discussion of current industry best practices/regulations that impacted the decision process.
   3. Implemented/proposed future state schematic/diagram(s) – multiple solutions are encouraged
2. Quantified evidence of improvements gained through changes via
   1. actual data (e.g. penetration tests, uptime logs, system robustness information, etc.)
   2. simulated data (e.g. results from simulated penetration tests/failure recovery/etc.) using industry accepted simulation methods
3. Summary analysis of the achieved (or potentially achieved) improvements. This should be in an executive summary type format that would be of a sufficient quality to present to the company executive who sponsored (approved) the project. Details that support the summary MUST be included in the final document as an appendix.