**Critical Outcomes for all Students**

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<th>Domain/Task/Capability</th>
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<td>1. PC Tech Support (General Technical)</td>
<td>a. Building, Configuring and Maintaining a PC: students will be able to correctly diagnose faults, remove faulty items, install items, and restore to working condition a personal computer. b. Managing and Maintaining an Operating System: students will be able to install, configure, diagnose and maintain operating systems, drivers and application software.</td>
<td>a. To be assessed through hands-on exam at the end of the 0805-217 PC Hardware II course. b. To be assessed through hands-on exam at the end of the 0805-215 PC Operating Systems course.</td>
<td>a. Given a PC with at least 3 random faults, (80% of) all students will be able to perform at a level of 2 or 3 in every measurable category. b. Given the written description of the required configuration of an operating system with its directories and file structures, (80% of) all students will be able to correctly perform at an average level of 2 or higher (meaning student can perform task(s) with no or minimal guidance) in every measurable category of a variety of functions including OS installation and configuration, program installation and management, creation and management of directories and file structures, partitioning and preparation of storage media.</td>
<td>a. At the end of each quarter the 0805-217 course is offered starting in 20052. b. At the end of each quarter the 0805-215 course is offered starting in 20053.</td>
<td>a. For n=33 16/33 or 49% were able to perform at an average level 2 or higher in every measurable category. b. For n=15, 4/15 or 27% were able to perform at an average level 2 or higher in every measurable category.</td>
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Instructors will review the assessment again to assure it is reasonable to
### 2. Networking (General Technical)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Details</th>
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<tr>
<td>a. Network Security, Networking Essentials and Client/Server Networks:</td>
<td>Students will be able to connect, configure, administer, secure and troubleshoot a multi-platform peer-to-peer or client/server network that supports file and print sharing.</td>
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<tr>
<td>a. To occur through a hands-on exam at the end of 0805-226 Client/Server Networks.</td>
<td>This will be used to assess all Networking related courses in the first year of the program.</td>
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<tr>
<td>a. Given the resources and functional/performance specifications,</td>
<td>(80% of) all students will be able to connect, configure, manage, secure and troubleshoot a small intranet peer to peer or client/server network.</td>
</tr>
<tr>
<td>a. Fall 20051</td>
<td>This will be measured by attaining a 2 or 3 in each measurable task on the hands-on exam.</td>
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#### Assessment of Networking
- a. Each quarter the 0805-226 course is offered starting in 20053. Data will be reported as an annual summation, rather than by the quarter in which it is offered.
- a. For n=16 4/16 or 25% were able to perform at a level 2 or higher on every measurable task.
- a. All students were required to do four tasks in addition to five more randomly assigned tasks in three hours. Students generally did well on the four required tasks. Almost every student was unable to do ALL randomly assigned tasks at a level 2 or higher. Perhaps looking at an average score would be a better representation of their skill. We will review that.

### 3. Web Development (General Technical)

<table>
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<tr>
<td>a. Web page Development:</td>
<td>Students will be able to create a multi-page Website using X(HTML) that contains text formatting, graphics, links, forms, tables and style sheets.</td>
</tr>
<tr>
<td>a. To occur through a hands-on exam at the end of the 0805-252 Web Development course.</td>
<td>a. Given a written specifications of what students are to develop, (80% of) all students will be able to create a Web site with given criteria using X(HTML).</td>
</tr>
<tr>
<td>a. Fall 20051</td>
<td>This will be measured by attaining a 2 or 3 in each measurable category on the hands-on final.</td>
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</table>

#### Assessment of Web Development
- a. Each quarter the 0805-252 course is offered starting in 20053. This was discontinued in 2009.

### Program Concentrations: Additional Technical Outcomes

**PC Tech Support (Technical Concentration)**
- a. Tech Support: Students will be able to support a multi-platform PC business environment including peripherals. |
- a. To occur through a hands-on final project at the end of 0805-337 Server Management and Security or 0805-350 Computer Interfacing. |
- a. Given a multiplatform simulated business environment, 85% of the students will be able to demonstrate that they can support the repair and maintenance of all computers and computer related peripherals. |
- a. Winter 20052 & Spring 20053 |
- a. For n=23, 17/23 for 74% attained a level 2 or higher on every measurable task.
- a. Although the assessment results did not meet the 85% goal, students did reasonably well on most questions. It seems that questions 12.1-12.4 showed the poorest results, so we will review those questions to see how we can enhance instruction in that area.
| Networking and Cyber Security (Technical Concentration) | a. Networking: Students will be able to install, configure, administer and troubleshoot a small LAN/WAN environment including servers. b. CyberSecurity: Students will be able to secure a LAN/WAN environment. | a. To occur through a hands-on final project at the end of the 0805-337 Server Management and Security course. b. To occur through project evaluation in the 0805-338 Firewall and IDS course. | a-b. Given a LAN/WAN environment, 85% of the students will be able to demonstrate they can install, configure, administer, secure and troubleshoot the network. This will be done by showing that students will attain a level of 2 or 3 on every measurable task. | a. For n=3, 0/3 or 0% attained a level 2 or higher on every measurable task. b. For n=3, 2/3 attained a level 2 or higher on every measurable task. | a. With an n so small, it is difficult to draw meaningful conclusions, but students clearly struggled with tasks related to questions 6.1-6.3, 7.1-7.3, and 12.1-12.4. We will review the tasks associated with those questions to see how we can enhance instruction in those areas. b. With such a small n, it is difficult to draw meaningful conclusions. We will review the assessment to see if it needs to be adjusted. |
| Web Development and Database (Technical Concentration) | a. Web Development: Students will be able to develop a professional-level website that incorporates the skills developed in all of the Web Development concentration courses. | To occur through the assessment of a portfolio developed during the course Advanced Web Development, the "capstone" course in the Web Development concentration. The portfolio will be assessed for students who have taken all four courses in the Web Concentration sequence. | Student work will be reviewed by the course instructor(s) using an assessment rubric which measures performance criteria. | AY 2007-08 | N/A - Assessment in this category was discontinued in 2009. |
| Other: | The department will get a clearer understanding of student's perceptions of the Web Development concentration. | A student survey was developed to assess students' perceptions of the Web Development concentration to help determine why so few students were choosing that concentration. | | | N/A |
| Student Satisfaction | Graduating students will indicate overall satisfaction with program and courses. | Student Satisfaction Survey | 80% of students will indicate they are "very satisfied" or "satisfied" on program related questions in a ICS program student | 2005-2006 | Annually | For n=17, students were asked 13 questions concerning the ICS department. In 12 of the 13 questions, more than 80% expressed satisfaction. One question, "I am comfortable talking the the ICS Chairperson" the results were below 80% satisfaction and this information will be shared with and reviewed by the ICS Chairperson to determine why some students might not be
### Job Placement
- Graduates will be employed in the field.

### NCE Placement Data
- 90% graduates will be employed in the field.

### Alumni Satisfaction
- Alumni will indicate satisfaction with the instruction they received at NTID/RIT.

### Alumni Survey
- 80% of Alumni will rate their NTID/RIT experience as Good or Excellent (5-point scale) for the instruction they received.

### Comments:
- The result was 78% satisfaction. (3/14 were not comfortable).
- Comfortable talking with her.
- Seven students who graduated with AS and AAS degrees opted to continue their education at RIT pursuing BS degree. That is very good. Will do a follow up on inactive students with NTID Center on Employment.

### Co-op Work Experience
- Students will demonstrate technical competency on co-op job.

### Co-operative Supervisor Evaluation
- 80% students will achieve a score of 3 or above (5-point scale) on overall student job performance statement on Co-op Supervisor Evaluation.

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