**Introduction**
This report presents findings of the ad-hoc committee on documentation. The 2008-2009 academic year student outcomes assessment report found that several courses were showing weaknesses in documentation. The ad-hoc committee, comprised of members of the assessment and curriculum committees, met in early 2010 to look for root causes of the weakness and recommend remediation strategies.

**Committee**
Jeff Roach, David Tarnoff, Chris Wallace, Ron Zucker

**Summary**
The Committee has five major recommendations:

1. Use CSCI 1250 to create expectations for documentation quality throughout the curriculum. Separate the CSCI 1250 Programming Standards into two documents: documenting & formatting. Make the instruction for documenting much simpler and shorter.

2. Encourage faculty to comment all code provided to students, i.e. in PowerPoint slides where feasible and prepared examples. Require documentation and commenting standards across entire curriculum.

3. On the next evaluation cycle measure the documentation questions of course rubrics towards the end of the course.

4. Add a rubric to CSCI 1250 to measure documentation.

5. Implement the recommendations created, wait for another rubric cycle after recommendations implemented (1 to 2 years), reevaluate.
Meeting Minutes  
January 28, 2010  

Present:  Jeff Roach, Dave Tarnoff, Chris Wallace, Ron Zucker  

Documents Reviewed:  
- Computer and Information Sciences Assessment Report 2008-2009  
- CSCI 1250 Programming Standards – Fall 2009  
- Ron Zucker’s Java Standards used at UNF  

Discussion:  
1. Assessment Report shows written work not satisfactory across curriculum. How can we improve this?  
2. Discussed the need to emphasis documentation early, especially CSCI 1250, where students are introduced to documenting.  
   - Recommendation: Focus heavily on CSCI 1250, improving documentation in this course will give students a good habit to do this throughout the curriculum.  
   - Recommendation: Documentation required of coding in all courses (see item 4)  
   - Possible Recommendation: More focus on design in CSCI 1250. Example: instead of three weeks covering loops, one week for documenting and designing loops and two weeks for loops coding.  
3. Ron’s Standards:  
   - Javadocs (used in Ron’s standards). Determined already in use in CSCI 1250  
   - Much shorter and easier to comprehend compared to the fourteen page rule book we currently use.  
   - Recommendation: Separate the CSCI 1250 Programming Standards into two documents: documenting & formatting. Make the instruction much simpler and shorter.  
4. Points for documentation. Jeff showed his grading rubric for CSCI 1250 with points towards documenting and that adding more points takes away from other areas. Discussed giving points for documenting versus taking points away for not documenting. Taking points away is one possible way to add more weight for documentation without taking away from other areas (and this was done in CSCI 1800 for years without problems).  
5. Ron stated Don Sanderson’s CSCI 2020 students documented well in CSCI 4717 course.  
   - Item discuss what Don does in the next meeting.  
6. Notebook - error log. Discussed the possibility of using a notebook to document errors and other ideas (just as this is common practice in engineering schools).  
7. Dave’s project in CSCI 2910  
   - Attempt to get the 2910 students to develop a web-based application to aid programmers. It might include:  
     - directed documentation tools  
     - automated debugging assistance  
     - portfolio support  
8. Discussed where exactly the documentation was failing with the rubrics. Decided that in the next meeting we start by looking at the individual rubric questions to see exactly what is lacking.  

Next meeting is Wednesday February 24th.
February 24, 2010

Present: Jeff Roach, Dave Tarnoff, Chris Wallace, Ron Zucker

Documents Reviewed:

- Rubrics completed which included commenting and documentation.

Discussion:

1. Discussed what methods Don Sanderson used in CSCI 2020:
   - Reviews the standards before first assignment and lab
   - Penalizes for poor documentation on both in-class labs and assignments consistently
   - Added comments and documentation to all code
     o Recommendation: Consistency: Encourage faculty to comment all code given, i.e. in PowerPoint slides and examples prepared for students. Require documentation and commenting standards across entire curriculum.

2. Discussed Rubrics completed.
   o Ron stated the comments in CSCI 4127 were excellent, but the rubric for CSCI 2020 had 48% not meeting expectation on commenting.
   o Recommendation: On the next cycle measure the comments questions towards the end of the course for all courses requiring comments.
   o CSCI 1710 rubric includes commenting which was not a focus when Jeff, Dave, and Chris taught the course. Should/Is that included in the curriculum?

3. CSCI 1250’s does not have a rubric.
   o Add a rubric to CSCI 1250 for documentation. This piece would allow us to determine where in the chain commenting is lost: beginning, middle, or end.
   o Recommendation: Implement the recommendations we created, wait for another rubric cycle after recommendation completed (1 to 2 years), come back and evaluate.

4. The fact this process revealed a problem will create an atmosphere where faculty focus on documenting in and of itself. That along with the recommendations given should create improvement.

5. Recommendation on page 2.

Recommendations:

1. Focus heavily on CSCI 1250: Improving documentation in this course will give students a good habit to do this throughout the curriculum. Separate the CSCI 1250 Programming Standards into two documents: documenting & formatting. Make the instruction much simpler and shorter.

2. Consistency: Encourage faculty to comment all code given, i.e. in PowerPoint slides and examples prepared for students. Require documentation and commenting standards across entire curriculum.

3. Evaluation: On the next cycle measure the comments questions towards the end of the course for all courses requiring comments.

4. Add a rubric to CSCI 1250 to measure documentation.

5. Implement the recommendations we created, wait for another rubric cycle after recommendations implemented (1 to 2 years), come back and evaluate.