1. **Overview**

The computer science program assessment plan provides a basis for obtaining feedback on the program and making improvements. This document describes the program assessment plan. It includes the basic goals and outcomes for the program, specifies assessment tools, and gives a timeline for assessing the program throughout the academic year. The plan is designed to obtain input from all constituents and to provide a structure for continuous improvement of both the program and the plan.

2. **Mission Statements**

This section lists the mission statements for the University, the College, and the Computer Science Programs.

2.1. **University Mission Statement**

The fundamental mission of UW-Platteville and the entire UW System is to serve the people of Wisconsin. This basic goal is expressed in detail in the mission statement adopted in 2002. In this statement, UW-Platteville pledges itself to:

1. Enable each student to become broader in perspective, more literate, intellectually more astute, ethically more sensitive, and to participate wisely in society as a competent professional and knowledgeable citizen.
2. Provide baccalaureate degree programs which meet primarily regional needs in arts and sciences, teacher education, business, and information technology.
3. Provide baccalaureate degree programs and specialized programs in middle school education, engineering, technology management, agriculture, and criminal justice which have been identified as institutional areas of emphasis.
4. Provide graduate programs in areas clearly associated with its undergraduate emphasis in education, agriculture, technology management, engineering, and criminal justice.
5. Provide undergraduate distance learning programs in business administration and graduate online programs in project management, criminal justice, and engineering.
6. Provide agricultural systems research programs utilizing the Pioneer Farm in partnership with businesses, universities and agencies.
7. Expect scholarly activity, including applied research, scholarship and creative endeavor, that supports its programs at the baccalaureate degree level, its selected graduate programs, and its special mission.
8. Serve the needs of all students and in particular the needs of women, minority, disadvantaged, and nontraditional students. Furthermore, to seek diversification of the student body, faculty and staff.

9. Serve as an educational, cultural, and economic development resource to southwestern Wisconsin.

These statements, along with the UW System and University Cluster mission statements, provide a guide to UW-Platteville in what it attempts and does not attempt to accomplish as an institution of higher education.

2.2. College Mission Statement

The College's objective is to ensure that its students gain the knowledge and develop the mental skills, attitudes, and personal characteristics necessary to become successful citizens and professionals who can meet the present needs of business, industry, government, and society, and the more demanding requirements of the future.

2.3. Computer Science Mission Statement

The mission of the Computer Science Program is to provide a quality computer science education with significant hands-on and laboratory experience that will enable our graduates to practice their profession with proficiency and integrity.

3. Computer Science Goals

Graduates are expected to have

1. the ability to apply the principles of analysis and design to software development;
2. knowledge of data structures, databases, algorithms, computer architecture, and operating systems,
3. the ability to develop effective software tests at the unit and system level
4. knowledge about the tools and environments used for software development;
5. written and oral communication skills, ethics, and professionalism to function effectively on software development teams, and in society in general; and
6. the ability to engage in life-long learning and recognize its importance.
4. Outcomes

4.1. Computer Science Outcomes

The following are the Computer Science Outcomes expected of the graduates of this program.

A. Foundation: Graduates will have a solid foundation computer science. These graduates will be able to apply this fundamental knowledge to both their immediate professional software development tasks, as well as to acquiring new professional skills throughout their lifetime.

B. Development: Graduates will be able to engage in effective software development practices over the entire system lifecycle. This includes requirements, analysis, design, implementation, and testing.

C. Professionalism: Graduates will conduct themselves ethically, honestly and professionally in all work environment activities. These activities include all interactions with employers, team members and peers, as well as customers.

D. Quality: Graduates will use industry recognized best practices to design, develop and deliver software that meets or exceeds applicable standards for utility, reliability, robustness, performance, correctness, maintainability, reusability, portability, and economy.

E. Presentation: Graduates will be capable of effective written and oral communication. Graduates will be capable of preparing and publishing the necessary project documents involved in the specification, design, testing, and deployment of software. Graduates will also be capable of actively participating in customary project discussions, walk-throughs, reviews and inspections.

F. Growth: Graduates will be able to provide themselves with life-long learning capabilities, such as the ability to learn new tools, to study new language processes, and generally adapt to new surroundings throughout their careers. This outcome is particularly critical due to the rapid evolution and rapid obsolescence of computer science knowledge and practices.
5. **Computer Science Constituencies**

The major constituencies of the computer science program are the students, alumni, faculty, employers, and advisory board.

6. **Assessment Tools**

The following section summarizes the assessment tools used to measure the effectiveness of the Computer Science program.

1. **Graduating Senior Exit Surveys**: Graduating seniors provide feedback by completing a standard exit survey during the last week of the semester they are graduating. The survey is designed to identify specific outcomes or areas in which the program is strong or needs improvement.

2. **Alumni and Employer Surveys**: These surveys are done annually and target two groups. The first group includes alumni who have been out of school for two years and their immediate supervisors. This group is surveyed because their initial job responsibilities are most directly related to the quality of technical education and preparation they received at UWP. The second group surveyed is those alumni who have been out of school for five years and their immediate supervisors. Alumni at this level have a basis for a more distanced evaluation of the program and can better assess the growth outcome.

3. **Course Surveys**: Course learning outcomes are included in each course. Students are surveyed in each course and asked whether or not the course learning outcomes are being met. The feedback received from this survey may indicate that certain things may need to be improved in that course. This provides a quick feedback mechanism. Program improvements resulting from this can be done quickly (in one semester).

4. **Course Portfolio**: A course portfolio is kept for each required computer science course. Course portfolios include the course syllabus and possibly other handouts. Furthermore, samples of exams, quizzes, homework, programs, and projects are included. The Computer Science faculty review course portfolios at the end of every semester. The primary objective of this is to continually review the course content and provide feedback regarding specific coverage areas in the curriculum.

5. **Advisory Board**: At least once per year, the computer science curriculum is presented to the Computer Science advisory board for comments and feedback. The computer science faculty review suggested additions and changes to the curriculum and incorporate the changes where deemed appropriate.

6. **Internship Supervisor surveys**: The supervisors of the co-op students are asked to fill out a standard survey. The purpose of this survey is to receive feedback from the
employers regarding the student’s preparation at that stage of the student’s education.

7. **Other data:** Data such as job placement rates and average salaries are used to evaluate the program against the national averages. The results obtained reflect the overall strength of the Computer Science program.

### Relationship of Computer Science Learning Outcomes and Assessment Tools

<table>
<thead>
<tr>
<th>COMPUTER SCIENCE LEARNING OUTCOMES</th>
<th>ASSESSMENT TOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrate solid foundation of computer science principals</td>
<td>A</td>
</tr>
<tr>
<td>2. Demonstrate effective software development techniques</td>
<td>X</td>
</tr>
<tr>
<td>3. Demonstrate ability to perform ethically, honestly, and professionally in the work environment</td>
<td>X</td>
</tr>
<tr>
<td>4. Apply industry-recognized best practices and applicable standards in developing software</td>
<td>X</td>
</tr>
<tr>
<td>5. Demonstrate effective written and oral communication skills</td>
<td>X</td>
</tr>
<tr>
<td>6. Demonstrate commitment to life-long learning and professional development</td>
<td>X</td>
</tr>
</tbody>
</table>

### ASSESSMENT TOOLS

- A. SENIOR EXIT SURVEYS
- B. ALUMNI & EMPLOYER SURVEYS
- C. COURSE SURVEYS
- D. COURSE PORTFOLIOS
- E. ADVISORY BOARD
- F. INTERNSHIP SUPERVISOR SURVEYS
- G. PLACEMENT & SALARY DATA

### 7. Assessment Timeline

The assessment of the program is a continuous process. The objective is continuous improvement in the quality of the computer science program. The following specifies the timeline for the various assessment activities:

- **January / September:** The CS faculty review the results of the senior exit surveys and issue a report
- **February / October:** The CS faculty review the results co-op supervisor survey results and issue a report
- **April:** The CS faculty review the alumni and employer survey results and issue a report
- **April / October:** The Computer Science Advisory Board meets at least one of these times per year and reviews the computer science curriculum. The comments from the board members are summarized in a report.
- **May / December:** The CS faculty review course portfolios and course objective evaluations and issue a report
- **October:** The CS faculty review the assessment tools and recommends any modifications
8. **Implementation**

Throughout the year, the assessment tools will be used to determine whether or not the program outcomes are being met, and if there are areas that need improvement. If there are program objectives that are not being met, the faculty will take steps to fix the problem. The steps include, but are not limited to:

1. Take appropriate corrective action in the specified course
2. Make curriculum changes to address the deficiencies
3. Reevaluate the program outcomes
4. Revise assessment tools and procedures