1.1. Software Engineering Mission Statement

The mission of the Software Engineering Program is to provide a quality software engineering education with significant hands-on and laboratory experience that will enable our graduates to practice their profession with proficiency and integrity.

2. Software Engineering Objectives

The objectives for the UWP software engineering program were changed in the fall of 2004. The new objectives were established by asking for input from the UWP software engineering major constituents: faculty, students, graduates, and advisory board members. Members of the advisory board included representative employers. The input from the constituents was distilled to a few broad objectives. The process went through a couple of iterations until everyone was satisfied with the results.

The current objectives, as adopted in December of 2004, are:

1. Graduates are effective team members, aware of cultural diversity, who conduct themselves ethically and professionally.

2. Graduates use effective communication skills and technical skills to assure production of quality software, on time and within budget.

3. Graduates build upon and adapt knowledge of science, mathematics, and engineering to take on more expansive tasks that require an increased level of self-reliance, technical expertise, and leadership.

3. Outcomes

3.1. Software Engineering Outcomes

The software engineering outcomes were modified in the December of 2005 in response to the modification of the software engineering objectives. The current outcomes, as adopted in December of 2005, are:

A. Foundation: Graduates shall have a strong foundation in science, mathematics, and engineering, and can apply this fundamental knowledge to software engineering tasks.

B. Development: Graduates can effectively apply software engineering practice over the entire system lifecycle. This includes requirements engineering, analysis, prototyping, design, implementation, testing, maintenance activities and management of risks involved in software and embedded systems.
C. Process: Graduates know various classical and evolving software engineering methods, can select appropriate methods for projects and development teams, and can refine and apply them to achieve project goals.

D. Professionalism: Graduates are knowledgeable of the ethics, professionalism, and cultural diversity in the work environment.

E. Quality: Graduates can apply basic software quality assurance practices to ensure that software design, development, and maintenance meets or exceeds applicable standards.

F. Presentation: Graduates have effective written and oral communication skills. Graduates can prepare and publish the necessary documents required throughout the project lifecycle. Graduates can effectively contribute to project discussions, presentations, and reviews.

G. Growth: Graduates understand the need for life-long learning and can readily adapt to new software engineering environments.