IBHE SHORT PROGRESS REPORT
Bachelor of Science in Computer and Information Technology

1. **Reporting Institution:**   **Eastern Illinois University**

2. **Reporting Program:**   **Bachelor of Science in Computer and Information Technology**

3. **Date:**   **December 9, 2020**

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5. **Summary of Program Goals and Objectives and Progress at Meeting Them**
   I: Introduction:

   Based on industry demand, the Bachelor of Science in Computer and Information Technology (CIT) commenced in the Fall of 2017 at Eastern Illinois University after several years of preparation, and discussions. The CIT program was based on the idea of preparing professionals to function as effective technically oriented computer professionals in a variety of public or private agencies and organizations.

   The Bachelor of Science in Computer and Information Technology has become an essential and one of the fastest growing programs within the School of Technology. The courses within Bachelor of Science in Computer and Information Technology have been made available to students via multiple modes of delivery including face-to-face, hybrid and online. As the students in the Bachelor of Science in Computer and Information Technology are required to take coursework from the School of Technology, Department of Mathematics and Computer Science and School of Business, students benefit from an academic atmosphere that provides an interdisciplinary, technical, and hands on structure designed to prepare graduates to understand and apply the knowledge and skills related to computer and information technology practice.

   II: Objective Alignment:
   The mission of the Bachelor of Science in Computer and Information Technology program is to prepare technical professionals for applications of computer and information technology. Upon completion of the degree program, students will be able to:

   1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
      a. Identifies the problem and problem-solving strategy.
      b. Applies appropriate solution method using math/science/engineering principles.
      c. Generates a problem solution
      d. Evaluates alternate solutions

2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
    a. Produce a design document to implement appropriate components or techniques
    b. Implement a component or technique or system or solution
    c. Evaluate a component or technique or system or solution to determine if it meets the specifications
    d. Revise solution based on the results of evaluation

3. Communicate effectively in a variety of professional contexts.

   Writing

    a. Creating documents appropriate for specific audiences, purposes, genres, disciplines, and professions.
    b. Crafting cogent and defensible applications, analyses, evaluations, and arguments about problems, ideas, and issues.
    c. Producing documents that are well-organized, focused, and cohesive.
    d. Using appropriate vocabulary, mechanics, grammar, diction, and sentence structure.
    e. Understanding, questioning, analyzing, and synthesizing complex textual, numeric, and graphical sources.
    f. Evaluating evidence, issues, ideas, and problems from multiple perspectives.
    g. Collecting and employing source materials ethically and understanding their strengths and limitations

   Speaking and Listening

    h. Collecting, comprehending, analyzing, synthesizing and ethically incorporating source material.
    i. Adapting formal and impromptu presentations, debates, and discussions to their audience and purpose.
    j. Developing and organizing ideas and supporting them with appropriate details and evidence.
    k. Using effective language skills adapted for oral delivery, including appropriate vocabulary, grammar, and sentence structure.
    l. Using effective vocal delivery skills, including volume, pitch, rate of speech, articulation, pronunciation, and fluency.
    m. Employing effective physical delivery skills, including eye contact, gestures, and movement.
    n. Using active and critical listening skills to understand and evaluate oral communication.

4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

    a. Identify professional competency in the discipline.
    b. Understand and apply code of ethics for the discipline.
    c. Evaluate the ethical dimensions of a problem in the discipline.

5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.

    a. Contributes to team meetings.
    b. Facilitates the contributions of team members.
    c. Individual contributions outside of team meetings.
    d. Fosters constructive team culture.

6. Use systemic approaches to select, develop, apply, integrate, and administer secure computing technologies to accomplish user goals.

    a. Investigate security vulnerabilities in a system.
    b. Use the principles of secure design.
    c. Discuss the benefits and limitations of designing multiple layers of defenses.
    d. Analyze the tradeoffs associated with designing security into a product.
    e. Apply security principles and practices in a system.

II.1   Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.

Required coursework are specifically designed to provide students with the tools to analyze problems and develop solutions while applying quantitative reasoning and critical thinking skills in Computer and Information Technology. Students complete assignments and projects in courses directly requiring application of these skills.

II.2   Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

Students design, implement and apply the tools and operations of various technological tools and design concepts as applied to real-world situations in business and industry in the required courses work. Students are required to complete comprehensive projects to demonstrate their knowledge of these such strategies, principles, and tools.

II.3   Communicate effectively in a variety of professional contexts.

Students are assessed during oral presentations, written assignments and virtual presentations, which is a partial requirement for coursework within the program.

II.4   Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

Core courses in Computer and Information Technology emphasize ethical considerations within a variety of contexts as well as educate students of their role in an environment filled with persons of diverse backgrounds and talents. Students submit assignments where they must analyze the implications of trends on society and must practice in teamwork key concepts of cultural inclusivity and responsible interaction.

II.5   Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.

Required coursework mandates students to work in teams where students hone their various skills such as communication, time management, problem-solving, listening, critical-thinking, collaboration and leadership.

II.6   Use systemic approaches to select, develop, apply, integrate, and administer secure computing technologies to accomplish user goals.

Students in CIT acquire knowledge and hands-on skills relating to securing computer technologies. Amongst others, these include security of databases, operating systems, network, and mobile and web applications. Students complete assignments and projects in courses directly requiring application of these skills.

III: Participation

The enrollment of the program has been healthy and on target. The following table illustrates the enrollment and graduation data for the Computer and Information Technology program since Fall 2017.

Table 1: Enrollment and Graduation trends for the Computer and Information Technology Program

Semester	2017 Fall	2018 Spring	2018 Fall	2019 Spring	2019 Summer	2019 Fall	2020 Spring	2020 Fall
Enrolled	21	31	42	42	-	60	63	70
Graduates	-	-	-	1	1	3	8	-

The demand and interest for the Computer and Information Technology program has been increasing since its inception. The program meets the needs of students from a wide variety of career interests including network system engineer, administrator of architect, information

security analyst, system administrator or programmer, database administrator, web designer or developer, computer programmer, software developer, mobile app developer, and computer user support specialist. The interest has been very strong from both current undergraduate EIU and transfer students. A recruitment plan was developed for the Computer and Information Technology program including faculty involvement and leadership, and to strive toward ensuring student diversity for the program.

IV: Assessment of Unit Outcomes

Program assessment has been an ongoing effort for the Computer and Information Technology program. The intention is to eventually seek program accreditation by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (CAC of ABET). Based upon the learning goals for graduate education at EIU, and program accreditation criteria established for Information Technology and Similarly Named Programs by the CAC of ABET, an assessment plan has been developed and data is being collected for the program by faculty members in charge of course instruction and by the Program Coordinator. A combination of direct and indirect assessment measures serves to provide the necessary data to enhance our academic programs, as well as contribute to the overall educational quality of the Computer and Information Technology program.

V: Conclusion

The Computer and Information Technology program has seen a strong start. The vision of a "computer" program enabled us to act a mission of preparing leaders for the field of Computer and Information Technology.

We know that student's objectives will be assessed within each course through the use of hands-on projects to measure outcomes. Overall program outcomes will be measured through the collection of course outcome data. Data will then be used to determine necessary changes to course materials and offerings. This, we expect, should result in continuous adjustment of instruction and curricular improvement to benefit the graduates of the program.

We have developed a Computer and Information Technology industry advisory board, consisting of executives, senior managers and information technology professionals from local as well as national industries.   These members, amongst other things, are continuously engaged to advise us on our curricula to meet the industry demands, develop industry partnerships for internships/employment opportunities for our graduates, as well as potential source of funding/grants/sponsorships for our program needs.

The collaboration among faculty in the School of Technology, Department of Mathematics and Computer Science and School of Business made it possible for a high-quality delivery of the undergraduate program. Student interests have been strong, and the enrollment is on target. Students are actively engaged in the learning process through course work, research, and professional interactions.

VI: Major Findings and Recommendations

There are no major findings and recommendations, as while assessment has commenced, we have not gone through a full cycle yet.

The student enrollment numbers continue to grow, and so does the Industry interest. We have setup quite a few 2+2s and other collaborations with the local colleges, increasing our local collaborations. With our advisory board, we have developed strong industry connections, which we are using to benefit our program, our students as well as our instructors. The program is very healthy, is very strong and we have received extremely positive feedback from the industry as well our graduates.

6.1   Decision
    X   Program in Good Standing
    ____   Program flagged for Priority Review
    ____   Program Enrollment Suspended

6.2   Explanation

The short report demonstrates the program already meets and exceeds critical IBHE productivity benchmarks. Further, the report underscores that assessment is central to the program and prioritizes continuous improvement. Further, the program and its leadership are to be applauded for efforts to collaborate within and between programs and the colleges on shared courses and curricula. In short, no concerns exists, the program is competitive, and recognized as in "good standing".

Jay D Gatrell
Provost & VPAA