# 3402 Program Vocational Learning Outcome

Program Vocational Learning Outcomes describe what graduates of the program have demonstrated they can do with the knowledge and skills they have achieved during their studies. The outcomes are closely tied to the needs of the workplace. Through assessment (e.g., assignments and tests), students verify their ability to reliably perform these outcomes before graduating.

1. identify, analyze, design, develop, implement, verify and document the requirements for a computing environment.

2. diagnose, troubleshoot, document and monitor technical problems using appropriate methodologies and tools.

3. analyze, design, implement and maintain secure computing environments.

4. analyze, develop and maintain robust computing system solutions through validation testing and industry best practices.

5. communicate and collaborate with team members and stakeholders to ensure effective working relationships.

6. select and apply strategies for personal and professional development to enhance work performance.

7. apply project management principles and tools when responding to requirements and monitoring projects within a computing environment.

8. adhere to ethical, social media, legal, regulatory and economic requirements and/or principles in the development and management of the computing solutions and systems.

9. investigate emerging trends to respond to technical challenges.

10. analyze and define the specifications of a software system based on requirements engineering processes and techniques.

11. design, develop, integrate, document, implement, maintain and test software systems based on software engineering methodologies, modern programming paradigms and frameworks.

12. analyze, evaluate and apply software engineering design techniques, data structures, algorithms, and patterns to the implementation of a software system.

13. design, model, implement, optimize and maintain a database and apply data mining concepts and tools for decision making.

14. develop, maintain and deploy software systems to resolve networking issues.

15. build automated software solutions through the analysis, evaluation, and integration of intelligent systems into various applications.

16. design and implement appropriate testing, verification and evaluation procedures to assess software quality and improve software performance.

17. create innovative and entrepreneurial concepts that lead to the development of new software products and/or the enhancement of existing ones.