Inwood Early College for Health and Information Technologies
Career and Technical Education Department

CTE Computer Science Pathway

TECHNICAL ASSESSMENT

Description: The Computer Science technical assessment is a three-part assessment that gives you the opportunity showcase what you have learned to prospective employers and post-secondary institutions. By passing all three parts of the technical assessment, you will also be eligible for a CTE endorsement on your high school diploma.

PARTS 1 and 2:

The Python Institute, Certified Entry Level Programmer Exam (PCEP 30-02) consists of a combination of multiple-choice and drag-and-drop questions that allow you to demonstrate understanding of the essentials of the Python programming language. The PCEP satisfies both parts 1 and 2 of the technical assessment.

The score required to pass parts 1 and 2 of the technical assessment is 70.

Note: *As a Computer Science major at Inwood Early College, in addition to the PCEP, you have the opportunity to showcase additional Computer Science skills and qualify for college credit by passing the following OPTIONAL industry and Advanced Placement exams:*

- *NOCTI – Web Design (3750) (Industry Credential)*
- *AP Computer Science Principles Exam (College Credit Opportunity)*
- *Python Institute: Certified Associate Python Programmer (PCAP 31-03) (Industry Credential)*

PART 3:

Professional Computer Science Portfolio – Beginning in Grade 9, as you progress through your Computer Science coursework you will have the opportunity to apply your skills by working on a variety of different projects. Your portfolio will serve as a curated sample of the projects you have completed.

When candidates are evaluated by prospective employers and post-secondary institutions, they are evaluated not only based on any industry credentials they may have earned, but also (and often more so) based on a body of their own work. As such, your portfolio is not only a crucial part of the technical assessment, but also another great way to showcase your skills!

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PART 3 (*Continued from previous page.*):

Content – At minimum, your portfolio must include the following:

- **Introduction** – Your introduction serves as the cover page of your portfolio. It should completely, clearly, and concisely provide an overview of your portfolio in a manner that captures the interest of prospective employers and post-secondary institutions.
- **Resume** – Your resume is a document that highlights your education, background experience, skills, and other accomplishments such as certifications, awards, etc. Your resume should be comprehensive, well-formatted, and current.
- **Artifacts of Learning** – The artifacts of learning you include in your portfolio serve as evidence of the technical skills you have developed as a Computer Science major. You may choose to include projects you completed as part of your coursework or projects you have completed on your own based on your coursework. Your portfolio must contain a minimum of four artifacts of learning:
    - One artifact from EITHER Introduction to Information Technology OR Introduction to Web Development.
    - One artifact from EITHER AP Computer Science Principles 1 OR AP Computer Science Principles 2.
    - One artifact from EITHER Python 1 OR Python 2.
    - One artifact from EITHER Data Science 1 OR Data Science 2.

    Note: *The artifacts of learning you include should demonstrate proficiency of the technical skills in the courses they are aligned to.*

- **Reflections** – You must include one reflection for each artifact of learning in your portfolio. The purpose of the reflection is to provide insight about each artifact and how it contributed to your overall learning as a Computer Science major. In crafting each reflection, you should address the following:
    - How would you describe this artifact, and what is its purpose?
    - In what ways did this artifact contribute to your overall learning experience as a Computer Science major?
    - How has this artifact been iteratively developed over time? (include specific examples)
    - Looking back, what might you have done differently?
    - If you were to further develop this artifact, what would your next steps be?

Presentation – Your portfolio should be presented in a web-based format. This may be either a website or a GitHub repository. Additionally, your portfolio should have a well-designed, professional appearance. It should grab the attention of prospective employers and post-secondary institutions. Finally, it should also be easily accessible and easy to navigate.

Your portfolio will be evaluated by a professional panel consisting of school faculty, industry representatives, and post-secondary representatives. The score required to pass part 3 of the technical assessment is 65.

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PROFESSIONAL COMPUTER SCIENCE PORTFOLIO RUBRIC:

Introduction				
Introduction provides a complete, clear, and concise overview of portfolio contents in a manner that captures the interest of prospective employers and post-secondary institutions. (15 points)	Introduction provides a complete, clear, and concise overview of portfolio contents. (12 points)	Introduction provides an overview of portfolio contents. (9 points)	Introduction makes limited reference to portfolio contents. (6 points)	No introduction OR Introduction makes no reference to portfolio contents. (0 points)
Resume				
Comprehensive, well-formatted, and current resume that highlights education, work experience, and skills, as well as other accomplishments (e.g. certifications, awards, etc.) (15 points)	Comprehensive, well-formatted, and current resume that highlights education, work experience, and skills. (12 points)	Current resume that highlights education, work experience, and skills. (12 points)	Resume makes reference to education, work experience, or skills. (6 points)	No resume OR Resume makes no reference to education, work experience, or skills. (0 points)
Artifacts of Learning – Technical Skills				
Artifact From: **Intro to IT or Web Development**	Demonstrates mastery of technical skills aligned to Intro to IT or Web Dev. (10 points)	Demonstrates proficiency of technical skills aligned to Intro to IT or Web Dev. (8 points)	Demonstrates developing understanding of technical skills aligned to Intro to IT or Web Dev. (6 points)	Demonstrates limited understanding of technical skills aligned to Intro to IT or Web Dev. (4 points)	Does not demonstrate understanding of technical skills aligned to Intro to IT or Web Dev. (0 points)
Artifact From: **AP Comp Sci Principles 1 or 2**	Demonstrates mastery of technical skills aligned to AP CSP 1 or 2. (10 points)	Demonstrates proficiency of technical skills aligned to AP CSP 1 or 2. (8 points)	Demonstrates developing understanding of technical skills aligned to AP CSP 1 or 2. (6 points)	Demonstrates limited understanding of technical skills aligned to AP CSP 1 or 2. (4 points)	Does not demonstrate understanding of technical skills aligned to AP CSP 1 or 2. (0 points)
Artifact From: **Python 1 or 2**	Demonstrates mastery of technical skills aligned to Python 1 or 2. (10 points)	Demonstrates proficiency of technical skills aligned to Python 1 or 2. (8 points)	Demonstrates developing understanding of technical skills aligned to Python 1 or 2. (6 points)	Demonstrates limited understanding of technical skills aligned to Python 1 or 2. (4 points)	Does not demonstrate understanding of technical skills aligned to Python 1 or 2. (0 points)
Artifact From: **Data Science 1 or 2**	Demonstrates mastery of technical skills aligned to Data Science 1 or 2. (10 points)	Demonstrates proficiency of technical skills aligned to Data Science 1 or 2. (8 points)	Demonstrates developing understanding of technical skills aligned to Data Science 1 or 2. (6 points)	Demonstrates limited understanding of technical skills aligned to Data Science 1 or 2. (4 points)	Does not demonstrate understanding of technical skills aligned to Data Science 1 or 2. (0 points)

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PROFESSIONAL COMPUTER SCIENCE PORTFOLIO RUBRIC *(Continued from previous page.)*:

Reflection				
Thoughtful written reflections for every artifact that describe how each contributed to the overall learning experience as a Computer Science major, as well as how each was iteratively developed over time, what might have been done differently, and next steps for further development. (15 points)	Written reflections for most artifacts that describe how each contributed to the overall learning experience as a Computer Science major, as well as how each was iteratively developed over time. (12 points)	Written reflections for some artifacts that describe how each contributed to the overall learning experience as a Computer Science major. (9 points)	Written reflections some artifacts that make reference to overall learning experience as a Computer Science major. (6 points)	No written reflections OR Written reflections make no reference to overall learning experience as a Computer Science major. (0 points)
Professional Presentation				
Portfolio is web-based. Every component has a well-designed, professional appearance that grabs the attention of prospective employers and post-secondary institutions. Portfolio is easily accessible and easy to navigate. (15 point)	Portfolio is web-based. Every component has a well-designed, professional appearance Portfolio is easily accessible to prospective employers and post-secondary institutions. (12 point)	Portfolio is web-based. The overall appearance of the portfolio is professional. (12 point)	Portfolio is web-based. Some components of the portfolio have a professional appearance. (6 points)	No web-based portfolio OR Portfolio is not presentable. (0 points)
Additional Feedback				

Score:	