The New Jersey Center for Teaching and Learning (NJCTL) offers online, asynchronous, learner-scheduled courses which prepare teachers of any subject area, to teach AP Computer Science A (AP CS A). These courses require no prior CS experience and include:

- Teaching methods
- AP CS A content and how to teach it
- Coached field experience to support first year AP CS A teachers

These courses can be taken anytime, anywhere...at your own pace.

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TEACHING METHODS FOR COMPUTER SCIENCE
Credits: 2
Teachers will learn how to use research-proven approaches to create a highly effective and welcoming learning environment for their students of Computer Science. Pedagogy topics include social constructivism; metacognition; differentiation; and meeting the needs of English language learners. Policy topics include grading based on mastery; why homework should not be graded; and providing retests to encourage continuous improvement.

COMPUTER SCIENCE FIELD EXPERIENCE I
Credits: 3
This is the first of two field experience courses in which candidates teach at least one section of Computer Science to students. Learners will develop a deeper understanding of PSI and teaching methods. Content topics will be drawn from prerequisite coursework.

COMPUTER SCIENCE FIELD EXPERIENCE II
Credits: 3
This is the second of two field experience courses in which candidates teach at least one section of Computer Science to students. Learners will continue to deepen their understanding of PSI and teaching methods. Content topics will be drawn from prerequisite coursework.

LEARNING AND TEACHING ADVANCED COMPUTER SCIENCE I
Credits: 5
This course is for teachers to learn the content of PSI Advanced Placement Computer Science A and how to teach that course to students. It focuses on fundamental programming skills and thought processes required for successful programming in any language while integrating components of Java. Topics include Fundamentals of Programming; Control Statements & Loops; Methods & Arrays; and Strings.

LEARNING AND TEACHING ADVANCED COMPUTER SCIENCE II
Credits: 5
This course is for teachers to learn the content of PSI Advanced Placement Computer Science A and how to teach that course to students. It focuses on object-oriented programming skills and thought processes required for successful programming in any language while integrating components of Java. Topics include Classes, Array Lists, Inheritance & Polymorphism, Recursion, and Searching & Sorting.
# Computer Science Teacher Education Program

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<th>Phase I: Prior to Fall Semester</th>
<th>Course #</th>
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