History & Justification: As Area D's title indicates "Natural Sciences, Math, and Technology," this core area should include Natural Sciences, Math, and Technology. But only D1 (for non-science majors) has courses for technology. Here is the proposed change to the core:

Add CSCI1301 and CSCI1302 into Area D2 (for science and math majors), specifically in the second list with all the math courses

Rationale: In the 21st century, computer technology permeates every aspect of human lives, making it imperative that everyone is equipped with some knowledge of computer technology. We therefore direct our attention to the fact that our Area D for science majors lacks courses in technology. We thus propose to add two computer science programming courses, CSCI1301 and CSCI1302, into the list of courses for the Area D for science and math majors. These two programming courses (learning Java programming language and programming skills) are the first two courses for computer science majors, which are in the same spirit of other science courses in Area D for science majors; all such courses are entry level courses for the respective science majors.

Java is the programming language used to create smartphone apps and many other software in different platforms. Learning this programming language will enable science and math majors in cutting edge fields like computing. The benefits are three fold: first, these students will be able to create software and apps for their own fields, which will increase their chances of developing an uncharted territory in their own fields. Second, students will strengthen their logical thinking and problem solving skills by taking these two computer science courses. Third, with this new skill, the students will increase their chances of finding a better job. According to the industry, there is a talent shortage in computing for all areas. Thus, the industry also will have a bigger talent pool to draw from. This will alleviate a talent shortage for the state of Georgia and the nation.

CSCI1301 Course topics include an overview of computers and programming; problem-solving and algorithm development; simple data types; arithmetic and logical operators; selection structures; text files; arrays; procedural abstraction and software design; modular programming.

CSCI1302 course topics include an overview of abstract data types; multi-dimensional arrays and records; strings; binary files; searching and sorting; software engineering concepts; dynamic data structures; introduction to object oriented languages and the concepts of object oriented design of algorithms.

Lyndall Muschell, CAPC Chair
11/4/16
Motion approved, forward to Senate