Department: Computer Information Technology
Sponsor/Program: Computer Programming Degree

Initiative Title: Develop a set of Guidelines/Best Practices Regarding Hands-On
Programming Instruction <u>Priority: 14</u>

Description:
> Programming courses are typically taught in a lecture format with hands-on
> programming practice in an independent lab setting. The programming faculty
> has begun to experiment with the use of hands-on activities in programming
> classes with the use of 12 laptops acquired through TACT funds. Both students
> and instructors have responded positively to the change and the faculty would like
> to integrate the laptops into the programming curriculum in a more systematic
> way. This initiative would involve: conducting a Computer Science Education
> literature review to identify a set of guidelines/best practices regarding hands on
> instruction in programming instruction, revising curriculum in programming
> courses to utilize these guidelines, developing a set of training materials for
> programming instructors based on the guidelines and conducting a series of
> training activities with programming instructors. The project would involve
> approximately six full and part time faculty members and would impact
> approximately 500 students in 20 programming sections each year.

Resources Needed:
> Professional development funds would be necessary to conduct the research,
> develop the guidelines as well as design and implement the training activities for
> programming faculty. Curriculum development funds would be necessary to
> revise the following courses: CS 160, CS161, CS 162, CS 260, CS 233, CS 195,
> CS 275 and CS 270. Six additional laptops should be added to each set to
> accommodate programming classes that contain more than 24 students. No
> additional software resources are required.

Possible Funding Sources:

Professional development funds:	100 hours * $25.94/hour =	$2594
Curriculum development funds:	100 hours * $25.94/hour =	2594
<u>TACT funds:</u>	<u>12 laptops * $1500/laptop =</u>	<u>18000</u>

1. Category of request: Increase student access to technology.

2. How does this request fit in with other unit or college technology plans? The
   college is committed to maintaining the instructional technical facilities at the
   level expected by the local community for graduates of technical programs.

3. Cost breakdown, including any unit resources being applied to project.
   12 laptops @ $1500 = $18,000

ORG & PROG codes (of FOAP):

How does this project articulate with college's Vision, Mission, & Goals and contribute toward meeting the President's/Board's approved goals?
This initiative supports the college's Mission to provide quality Professional Technical degree programs. The initiative will improve programming instruction, and therefore, has the potential to attract additional students to programming courses. It supports both the Learning and Innovation Core Values of the college as well as the college goal of financial stability.