

Curriculum Committee



New Course Proposal

School or Division	School of Business and Technology
Program or Certificate	Information Systems Technology
Proposed by (faculty only)	George Kodsey & Mary Myers
Presenter (faculty only)	George Kodsey
Note that the presenter (faculty) listed above must be present at the Curriculum Committee meeting or the proposal will be returned to the School or Division and must be submitted for a later date.	
Submission date	3/19/2020
Course prefix, number, and title	COP3538 – Data Structures for IT
<p>All Curriculum proposals require approval of the Curriculum Committee and the Provost. Final approval or denial of a proposal is reflected on the completed and signed proposal.</p> <p><input checked="" type="checkbox"/> Approve <span style="margin-left: 200px;"><input type="checkbox"/> Do Not Approve</span></p> <p><u>Mary R. Myers</u> <span style="margin-left: 200px;"><u>4/8/2020</u></span> Curriculum Committee Chair Signature <span style="margin-left: 200px;">Date</span></p>	
<p><input checked="" type="checkbox"/> Approve <span style="margin-left: 200px;"><input type="checkbox"/> Do Not Approve</span></p> <p><u>[Signature]</u> <span style="margin-left: 200px;"><u>5-21-2020</u></span> Provost Signature <span style="margin-left: 200px;">Date</span></p>	
<p>All Curriculum proposals require review by the Office of Accountability &amp; Effectiveness.</p> <p><input checked="" type="checkbox"/> Reviewed</p> <p><u>[Signature]</u> <span style="margin-left: 200px;"><u>5/21/2020</u></span> Office of Accountability &amp; Effectiveness Signature <span style="margin-left: 200px;">Date</span></p>	

**Section I, Important Dates and Endorsements Required**

**NOTE:** Course and Program changes must be submitted by the dates listed on the published Curriculum Committee Calendar. Exceptions to the published submission deadlines must receive prior approval from the Provost' Office.

<b>Term in which approved action will take place</b>	Fall 2021
<b>Provide an explanation below for the requested exception to the effective date.</b>	

<b>Any exceptions to the term start date requires the signatures of the Academic Dean and Provost prior to submission to the Dropbox.</b>		
<b>Dean</b>	<b>Signature</b>	<b>Date</b>
<b>Provost</b>	<b>Signature</b>	<b>Date</b>

<b>Required Endorsements</b>	<b>Type in Name</b>	<b>Select Date</b>
<b>Department Chair or Program Coordinator/Director</b>	Dr. Mary Myers	3/17/2020
<b>Academic Dean or Provost</b>	Dr. Debbie Psihountas	3/17/2020

<b>List all faculty endorsements below. (Note that proposals will be returned to the School or Division if faculty endorsements are not provided).</b>
Prof Melinda Lyles, Dr. Mary Myers, Dr. George Kodsey, Dr. Roger Webster

<b>Has the Libraries' Collection Manager been contacted about the new course and discussed potential impacts to the libraries' collections?</b>
No

**Section II, New Course Information (must complete all items)**

<b>List course prerequisite(s) and minimum grade(s) (must include minimum grade if higher than a "D").</b>	COP2800 Java Programming OR COP2360 C# Programming I with a grade of "C" or better.
<b>Provide justification for the proposed prerequisite(s).</b>	Students should have taken an object-oriented programming class before studying Data Structures.
<b>Will students be taking any of the prerequisites listed for this course in different parts of the same term (ex. Term A and Term B)?</b>	No
<b>List course co-requisites.</b>	
<b>Provide justification for the proposed co-requisite(s).</b>	
<b>Is any co-requisite for this course listed as a co-requisite on its paired course?</b> (Ex. CHM 2032 is a co-requisite for CHM 2032L, and CHM 2032L is a co-requisite for CHM 2032)	
<b>Course credits or clock hours</b>	3 course credits Must pass with a "C" or better.
<b>Contact hours (faculty load)</b>	3
<b>Are the Contact hours different from the credit/lecture/lab hours?</b>	No
<b>Select grade mode</b>	Standard Grading (A, B, C, D, F)
<b>Credit type</b>	College Credit
<b>Possible Delivery Types (Online, Blended, On Campus)</b>	Online, Blended, On Campus
<b>Course description (provide below)</b>	
This course introduces the student to the basic concepts of data structures in software development including lists, stacks, queues, binary search trees, binary trees, hash tables, and internal searching and sorting. It also introduces the student to running time of a program, and algorithm efficiency.	

**General topic outline (type in outline below)**

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- Choosing among the various data structures.
  - Data structures use in practice.
  - Efficiency of a data structure.
  - How to determine the efficiency of an algorithm.
  - Recursive data structures and algorithms.
  - Lists, stacks, queues
  - Binary trees and binary search trees,
  - Hash tables
  - Internal searching
  - Sorting.



**Learning Outcomes:** For information purposes only.

#### **IV. Course Competencies, Learning Outcomes and Objectives**

##### **A. General Education Competencies and Course Outcomes**

1. Integral *General Education Competency or competencies*:  
General Education Competency: **Evaluate**

Course Outcomes or Objectives Supporting the General Education Competency Selected:

- Students will select appropriate built-in data types and library data structures (abstract data types) to model, represent, and process program data.
- Students will write programs that use data structures (built-in, library, and programmer-defined): strings, vectors, lists, and maps.
- Students will analyze the performance of different implementations of data structures.

2. Supplemental *General Education Competency or competencies*: **Communicate**

- Students will explain appropriateness of selected data structures.

**B. In accordance with Florida Statute 1007.25 concerning the state's general education core course requirements, this course meets the general education competencies for ....**

Part B would only be included in the course outlines of those courses are included in the FSW Catalog as a General Education Core Course. If this is not a core course, then outline letter C would become B.

**C. Other Course Objectives/Standards**

**Copy and Paste the SCNS Course Profile Description below ([http://scns.fldoe.org/scns/public/pb\\_index.jsp](http://scns.fldoe.org/scns/public/pb_index.jsp)).**

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BASIC CONCEPTS OF RUNNING TIME OF A PROGRAM, DATA STRUCTURES INCLUDING LISTS, STACKS, QUEUES, BINARY SEARCH TREES, BINARY TREES, HASH TABLES, AND INTERNAL SEARCHING AND SORTING.

<b>ICS code for this course</b>	ADVANCED AND PROFESSIONAL - 1.16.07 - COMPUTER & INFO SCIENCE
<b>Institutional Reporting Code</b>	11607 COMPUTER AND INFOR SCIENCE
<b>Degree Attributes</b>	BAS - BAS COURSE
<b>Degree Attributes (if needed)</b>	Choose an item.
<b>Degree Attributes (if needed)</b>	Choose an item.
<b>Degree Attributes (if needed)</b>	Choose an item.
<b>Should any major restriction(s) be listed on this course? If so, select "yes" and list the appropriate major restriction code(s) or select "no".</b>	Yes BAS-IST
<b>Is the course an "International or Diversity Focus" course?</b>	No, not International or Diversity Focus
<b>Is the course a General Education course?</b>	No
<b>Is the course a Writing Intensive course?</b>	Yes
<b>If Replacing a course, combining a Lecture/Lab or splitting a C course – Is there a course equivalency?</b>	
<b>Is the course repeatable*?</b>  (A repeatable course may be taken more than one time for additional credits. For example, MUT 2641, a 3 credit hour course can be repeated 1 time and a student can earn a maximum of 6 credits). *Not the same as Multiple Attempts or Grade Forgiveness	No
<b>Do you expect to offer this course three times or less (experimental)?</b>	No

<b>Impact of Course Proposal</b>	
<b>Will this new course proposal impact other courses, programs, departments, or budgets?</b>	No
<b>If the answer to the question above is "yes", list the impact on other courses, programs, or budgets?</b>	
<b>Have you discussed this proposal with anyone (from other departments, programs, or institutions) regarding the impact? Were any agreements made? Provide detail information below.</b>	

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**Section III, Justification for proposal**

**Provide justification (below) for this proposed curriculum action.**

This course is being proposed as an update to the curriculum in the BAS- Information Technology Systems degree. Data structures are an important concept in programming.