

Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title - Programming Fundamental III

Course Prefix and Number - COSC 2336

Department – Computer Science

Division – Technology & Business

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours #: Lecture Hours #: Lab/Other Hours #: 3:2:2

Equated Pay hours for course - 3

Course Catalog Description –

Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms using Java. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis. (This course is included in the Field of Study Curriculum for Computer Science.)

Prerequisites/Co-requisites – COSC 1437

List Lab/ Other Hours
Lab Hours 2
Clinical Hours 0
Practicum Hours 0
Other (list) 0

Prepared by: Donna Schilling

Date: 07-19-2015

Reviewed by Department Head: Donna Schilling

Date: 07-19-2015

Accuracy verified by Division Chair: David Kucera

Date: 8/12/15

Approved by Dean or Vice President of Instruction: Leigh Ann Collins

Date: 3-4-16

I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, clinical or other non-lecture instruction):

- Review of Class
- Review of Array
- Search Algorithms
- Sort Algorithm
- Link Lists
- Recursion
- Stacks
- Queues
- Trees
- Iterators
- Heaps

II. Course Learning Outcomes

Learning Outcomes	Methods of Assessment
<p>Upon successful completion of this course, students will:</p> <p>Demonstrate the Knowledge of Data Structure using Java</p>	<p>Individual Programming Projects Tests and Quizzes Final Exam</p>

III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

- Tony Gaddis, Starting out with Java From Control Structures Through Data Structure, second Edition, Addison Wesley, ISBN # 10: 0-13-54586-9
- High-speed Internet Connection

IV. Suggested Course Maximum - 20

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

- Computer for each student with JDK-7 and Jgrasp

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

- Course Requirements
 - 50% - Lab Projects*
 - 50% - Midterm & Final Exam*

Grading System –

100 -90	= A
89 - 80	= B
79 - 70	= C
69 - 60	= D
and below	= F

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed

- **Academic WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:

- Basic Intellectual Competencies
- Perspectives
- Exemplary Educational Objectives

- **WECM Courses**
If needed, revise the Program SCANS Matrix & Competencies Checklist.