



هيئة تقويم التعليم

Education Evaluation Commission

المركز الوطني للتقويم والاعتماد الأكاديمي

National Center for Academic Accreditation and Evaluation

COURSE SPECIFICATIONS (CS)

Course Specifications

Institution: Najran University	Date of Report: June 01, 2017
College/Department: College of Computer Science and Information systems, Department of Computer Science	

A. Course Identification and General Information

1. Course title and code: Object Oriented Programming (113 CSS-4)			
2. Credit hours: 4 (3,1,1)			
3. Program(s) in which the course is offered. Bachelor Degree Program			
4. Name of faculty member responsible for the course: Ms. Sahar Alwadei			
5. Level/year at which this course is offered: Level 4/2 rd year (Preparatory Year included).			
6. Pre-requisites for this course (if any): Programming Languages 1 (111CSS-4)			
7. Co-requisites for this course (if any): N/A			
8. Location if not on main campus: College of Computer Science and Information Systems (Female Campus)			
9. Mode of Instruction (mark all that apply)			
a. Traditional classroom	<input type="checkbox"/>	What percentage?	<input type="checkbox"/>
b. Blended (traditional and online)	<input checked="" type="checkbox"/>	What percentage?	100%
c. e-learning	<input type="checkbox"/>	What percentage?	<input type="checkbox"/>
d. Correspondence	<input type="checkbox"/>	What percentage?	<input type="checkbox"/>
f. Other	<input type="checkbox"/>	What percentage?	<input type="checkbox"/>
Comments:			
Mainly following teaching strategies are used under traditional classroom:			
<ul style="list-style-type: none"> • Deliver PPT presentations in the class utilizing the white board for further illustrations and examples. • Encourage the students to be active during class by considering their answers or comments as a main input. • The students asked by the end of the lecture about the muddiest point so it would be the start of the next one to be explained further using different methods. • Motivate the students to work at home, search the internet, read and code the concepts explained following their examples in the text book then do some exercises. • Students given the chance to lecture defined subsections by the instructor. 			

B. Objectives

1. What is the main purpose for this course? Introduce the student to object oriented programming (OOP) concepts, basic Java syntax, introduction to objects and classes, data types, variables and operators, selection and control structures, array, properties of classes, inheritance, package and interface, abstract class, polymorphism, file system, I/O.
2. Briefly describe any plans for developing and improving the course that are being implemented. Increased use of web based reference material, provide e-copies of the text book so the instructor and the students can access its support materials and use its provided features, assign the introductory part to the pre-requisite course to intensely explore the advanced concepts.

C. Course Description

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact Hours
Quick overview of Java, Anatomy of First Simple program of Java.	1	5
Elementary Programming Examining Java's most fundamental elements: Data types and variables, use of data types and dynamic initialization. Scope and life time of variable.	2	10
Control Statements: Selection (if, nested if, if – else – if, switch), iteration (while, do – while, for) and jump (break, continue and return).	1	6
Basic elements of class, operator new, creation of objects, methods, constructors, Overloading methods, overloading constructors.	2	10
Introducing access control, Understanding static. Array Basics, Arrays of Objects.	1	6
Inheritance Basics, Polymorphism, Method overriding, applying method overriding.	1	6
Basic GUI: Frame, Buttons, Layouts, Paint	1	6
Exception handling	1	5
Using abstract classes, using final to prevent overriding. Packages, access protection, importing packages	2	10
Defining and implementing Interface, Variables in interface	2	6
I/O Basics, Streams, reading characters and string, Reading and Writing files.	1	6

2. Course components (total contact hours and credits per semester):							
		Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	Planned	45	6		30	-	81
	Actual	45	6		30	-	81
Credit	Planned						
	Actual	3	0	0	1	-	4

3. Additional private study/learning hours expected for students per week.

8 - 12 hours

At least 6-9 hours per week to refresh the topics discussed during the lectures, tutorials and in the Lab preparation depending on students' ability to understand the class.

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Ability to describe the basic concepts of alphabets, strings, regular expressions, languages, derivation (leftmost and rightmost), finite state machines, pushdown automata, Turing machines, decidability, halting problems and time complexity.	Lectures, active learning, collaborative and cooperative learning and independent study assignments are used as teaching strategies. <ul style="list-style-type: none"> Showing and delivering PPT presentation in the class. 	Following methods are used to assess student's knowledge acquire in this course. <ul style="list-style-type: none"> Class Quizzes. Midterm exam1 and Midterm exam2 Final Exam
1.2	Recognize Java syntax and semantics.	<ul style="list-style-type: none"> Using white board to explain important points in more detail. Motivating students to be active during class by asking questions regularly during lecture. Motivating students to work in home, to search from internet, to read related reference books by giving them assignments related to real world problem solving and Java implementation. Let students to solve the problems related to real 	

		<p>world problems and Java implementations in small groups and giving correction on their solution during class.</p> <ul style="list-style-type: none"> • Motivating students to be active during class by asking questions regularly. • Giving students' tutorials related to importance of Object Oriented Programming and its implementation etc. 	
2.0 Cognitive Skills			
2.1	<p>Following are the cognitive skills which are developed in this course:</p> <ul style="list-style-type: none"> • Use of Java Standard Classes. • Implement Object Oriented techniques to solve problems 	<ul style="list-style-type: none"> • Using the Java Standard Classes in a typical program on white board for students to make them more familiar with various problem-solving techniques. • Let students to solve the problems related to the use of Java built in classes from Application Programming Interface in small groups and giving correction on their solution during class. • Motivating students to be active during class by asking questions regularly. • Let students to present their work after group discussion session. Giving students' tutorials related to importance of abstract class, interface and differentiate between method overloading and method overriding. • Motivating students to work in home, to search from internet, to read related reference books by giving them assignments. 	<p>Following methods are used to assess student's cognitive skills.</p> <ul style="list-style-type: none"> • Class Quizzes. • Individual assignments. • Two midterm exams. • Mid Lab Exam and Final Lab Exam. • Final written exam.

		<ul style="list-style-type: none"> Use of Java to implement the different Object-Oriented Techniques. 	
3.0	Interpersonal Skills & Responsibility		
3.1	<p>Following are the interpersonal skills which are developed in this course:</p> <ul style="list-style-type: none"> Finish the individual assignments related to design the various model of computation. Response in class discussion. Developing oral presentation skills. Presenting report on finding on assigned tasks. 	<ul style="list-style-type: none"> Student presentation to present their finding on assigned problems. Two individual assignments which require investigation using provided reading material, library resources as a means of developing the self-study. 	<ul style="list-style-type: none"> Capacity for independent study assessed in individual programming assignments.
4.0	Communication, Information Technology, Numerical		
4.1		<ul style="list-style-type: none"> Demonstrate the efficient use of Java. Compute and calculate the area of different geometric shapes which requires numerical analysis and skills. Assigning exercise program during the lab. To illustrate the important components of communication skills and based on developing critical skills, observations, experiments, and feedback. Encouraging & motivating the students to use the library and internet resources. 	<ul style="list-style-type: none"> Group discussion. Showing and delivering PPT presentation in the class and PDF format of course book. Showing how to operate and work with Java programming language. Two individual assignments which require investigation using provided reading material, internet search and library resources as a means of developing the self-study. Giving correction in Lab activity.
5.0	Psychomotor		
5.1	N/A	N/A	N/A

5. Schedule of Assessment Tasks for Students During the Semester			
#	Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Quizzes	5 th , 11 th	5%
2	Midterm	6 th , 10 th	30%

3	Assignment	12 th	5%
4	Lab Performance	Throughout semester	15%
5	Lab Final Exam	14 th	10%
6	Final Exam	16 th	40%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

During the semester, there are ten hours per week reserved as office hours and announced to the students. These hours are their right to visit and ask for any form of help that might enhance their performance. They were also guided to use better methods while studying the theoretical parts as well as the practical ones. Their codes were reviewed regularly and they were encouraged to practice more at home. Also, a group on Telegram was created on the beginning of the semester and has been utilized very well throughout the semester. It has been a very useful tool for the student to discuss further beyond the class.

E. Learning Resources

1. List Required Textbooks

- Introduction to Java Programming Comprehensive Version Tenth Edition, by Y. Daniel Liang, ISBN-13: 978-0133761313 ISBN-10: 0133761312

2. List Essential References Materials (Journals, Reports, etc.)

1. Herbert Schildt The Complete Reference, JAVA 2, 8th Edition, 2014, McGraw Hill Publishing Company Ltd
2. Harvey M. Deitel and Paul J. Deitel, Java, How to Program: Java™, 7th Edition, 2011, Prentice Hall.
3. Thomas Wu, An Introduction to Object-Oriented Programming with JAVA, 2009, McGraw-Hill.
4. Note: Handouts will be distributed in class, when appropriate, to cover some of the course topics.

3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)

5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

Lecture Rooms with 30 seats with a multimedia projector, white board, personal computer, one table.

2. Computing resources (AV, data show, Smart Board, software, etc.)

Desktop/ Laptop computer, Multimedia Projector


3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

A File cabinet to keep Class Stuffs, Markers, papers and student's files, and a printer.

G. Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching <ul style="list-style-type: none"> Collecting students' questionnaire about the faculty and teaching. Collecting students' suggestions for development during the class. Students' questioner once during semester. Meeting with course coordinator and college coordinator periodically.
2. Other Strategies for Evaluation of Teaching by the Program/Department Instructor <ul style="list-style-type: none"> Independent assessment of standard achieved by students.
3. Processes for Improvement of Teaching <ul style="list-style-type: none"> Note down the problem that face during class and try to solve those problems by discussing senior faculty members. Learning best teaching methods from the best teacher amongst all faculty members and other resources.
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) <ul style="list-style-type: none"> Getting feedback from the students who will pass the course and work in the practical field.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. <ul style="list-style-type: none"> Preparing Course Report Planning to update Course Syllabus

Name of Course Instructor: Ms. Sahar Alwadei

Signature:  Nov 28, 2017.

Date Specification Completed: November 28, 2017

Program Coordinator: Dr. Abdulrahman Al Thaqfan

Signature: 

Date Received: _____