

Advanced Programming

Course Title: Advanced Programming					
Course Code: CIT62002	Student Workload: 14.16 Hours/Weeks	Credits: 5 Credits (7.50 ECTS)	Semester: 2 st Semester	Frequency: Even Semester	Duration: 16 Weeks/Semester (Lecture: 14 weeks; Midterm assessment: 1 week; Final assessment: 1 week)
1	Types of Courses: Knowledge Course	Contact Hours: <i>Lecturing:</i> 3.33 Hours/Week; <i>Practical Work:</i> 0.83 Hours/Week	Independent Study: <i>Self-study:</i> 5.00 Hours/Week; <i>Structured Assignment:</i> 5.00 Hours/Week	Class Size: 40 Students	
2	Prerequisites for Participation (If Applicable): Basic Programming				
3	Learning Outcomes: <ol style="list-style-type: none"> 1. M1: Students are able to understand the concepts of object-oriented programming, classes and access modifiers. 2. M2: Students are able to understand and use the concepts of derivation, encapsulation and polymorphism. 3. M3: Students are able to understand and use abstract classes, interfaces, exceptions, generic classes and inner classes. 4. M4: Students are able to create programs using object-oriented programming concepts. 				
4	Subject aims/Content: At the end of the course, students are expected: <ol style="list-style-type: none"> 1. L1: Students are able to understand the difference between structured programming paradigms and OOP. (M1) 2. L2: Students are able to understand the concept of abstraction, class and object. (M1) 3. L3: Students are able to apply creating classes and objects, creating reference variables, calling data and object methods. (M1) 4. L4: Students are able to apply the use of constructors, default and non-default constructors. (M1) 5. L5: Students are able to apply the concept of encapsulation in classes and objects. (M2) 6. L6: Students are able to apply the concept of inheritance (inheritance) in Java programming. (M2) 7. L7: Students are able to apply the concept of polymorphism in java programming. (M2) 8. L8: Students are able to implement abstract classes and interfaces in java programming. (M3) 9. L9: Students are able to apply the concept of exception handling in Java programming. (M3) 10. L10: Students are able to apply writing and reading files in java. (M4) 11. L11: Students are able to apply programming with Graphical User Interface (GUI). (M4) 				
5	Teaching Methods: Lecturing, Group Discussion, Case-Based Learning, Project-Based Learning				
6	Assessment Methods: Essay, multiple-choice, product assessment, project assessment, anecdotal record/logbook				
7	This Course is Used in The Following Study Programme/s as Well: -				

8	Responsibility for Course: Bayu Rahayudi, S.T., M.T.
9	Other Information: Bibliography: 1. Y. Daniel Liang. 2015. Introduction to Java Programming, Comprehensive Version, 10th Edition. Prentice Hall