Database Programming

<table>
<tr><td colspan="7">Course Title: Database Programming</td></tr>
<tr><td colspan="2">Course Code:
CIE60045</td><td>Student Workload:
8.50 Hours/ Weeks</td><td>Credits:
3 Credits (4.50 ECTS)</td><td>Semester:
5th Semester</td><td>Frequency:
Odd Semester</td><td>Duration:
16 Weeks/ Semester (Lecture: 14 weeks; Midterm assessment: 1 week; Final assessment: 1 week)</td></tr>
<tr><td>1</td><td colspan="2">Types of Courses:
Content Knowledge Course</td><td colspan="2">Contact Hours:
Lecturing: 1.67 Hours/ Week; Practical Work: 2.83 Hours/ Week</td><td colspan="2">Independent Study:
Self-study: 2.00 Hours/ Week; Structured Assignment: 2.00 Hours/ Week</td><td>Class Size:
40 Students</td></tr>
<tr><td>2</td><td colspan="6">Prerequisites for Participation (If Applicable):
Database Design and SQL</td></tr>
<tr><td>3</td><td colspan="6">Learning Outcomes:
1. M1: Able to explain concepts in database programming and examine appropriate database objects to support better information system performance (ILO-2) (0,1)
2. M2: Able to identify problems that become a need in application development for better database access and performance (ILO-5) (0,3)
3. M3: Able to apply basic concepts of database programming to database objects to be used in the development of information systems needed by the organization (ILO-9) (0,3)
4. M4: Able to demonstrate understanding and application of database programming on Stored Procedure, Function, and Trigger objects appropriately according to needs in information system development (ILO-12) (0,3)</td></tr>
<tr><td>4</td><td colspan="6">Subject aims/Content:
At the end of the course, students are expected:
1. L1: Able to determine database objects that suit the needs of information system development (M1)
2. L2: Able to solve database access and performance problems through the application of Stored Procedures, Functions, and Triggers (M2)
3. L3: Able to apply Dynamic SQL, Conditional Handling, and nested and recursive SQL on database objects (M3)
4. L4: Able to develop database programming results in Stored Procedures, Functions, and Triggers on the selected RDBMS server (M4)
5. L5: Able to complete the provision of Stored Procedure, Function, and Trigger database objects to manage access, improve performance, and response from database servers (M4)</td></tr>
<tr><td>5</td><td colspan="6">Teaching Methods:
Lecturing, Group Discussion, Project-Based Learning</td></tr>
<tr><td>6</td><td colspan="6">Assessment Methods:
Essay, Performance Test, Anecdotal Record/Logbook, Project Assessment</td></tr>
<tr><td>7</td><td colspan="6">This Course is Used in The Following Study Programme/s as Well:
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<tr><td>8</td><td colspan="6">Responsibility for Course:
Satrio Agung Wicaksono, S.Kom., M.Kom.
Satrio Hadi Wijoyo, S.Si., S.Pd., M.Kom.</td></tr>
<tr><td>9</td><td colspan="6">Other Information:
Bibliography:
1. Yip, Paul. 2003. DB2 SQL Procedural Language for Linux, Unix, and Windows, Prentice Hall Professional.
2. Bedoya, Hernando. 2006. Stored Procedures, Triggers, and User-Defined Functions on DB2 Universal Database for iSeries, IBM Redbooks.</td></tr>
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