



**UNIVERSITAS MATARAM**  
*(University of Mataram)*  
**FAKULTAS TEKNIK**  
*(Faculty of Engineering)*  
**PROGRAM STUDI TEKNIK INFORMATIKA**  
*(Department of Informatics Engineering)*

**MODULE HANDBOOK DESCRIPTION**

Visual Programming (D18KB312)

Module designation	Visual Programming
Semester(s) in which the module is taught	<i>5 / third year</i>
Person responsible for the module	<i>Ahmad Zafrullah Mardiansyah, S.T., M.Eng.</i>
Language	<i>Indonesian</i>
Relation to curriculum	<i>Compulsory</i>
Teaching methods	<i>Lectures, Discussions, Project</i>
Workload (incl. contact hours, self-study hours)	Contact Hours every week, each week of the 16 weeks/semester including Evaluation <ul style="list-style-type: none"> <li>● 3 x 50 minutes lecturer/week</li> <li>● 3 x 60 minutes class exercise/week</li> <li>● Self Study hours = 120 minutes/week</li> </ul> Total workload 340 minutes/week
Credit points	<i>3 (~ 3,2 ECTS)</i>
Required and recommended prerequisites for joining the module	Algorithm and Programming

<p>Module objectives/intended learning outcomes</p>	<ol style="list-style-type: none"> <li>1) Week 1 <ol style="list-style-type: none"> <li>a. Visual Programming</li> <li>b. Visual Programming Language</li> </ol> </li> <li>2) Week 2 <ol style="list-style-type: none"> <li>a. Introduction</li> <li>b. "Hello World"</li> <li>c. Major Class</li> </ol> </li> <li>3) Week 3 <ol style="list-style-type: none"> <li>a. Signals</li> <li>b. Slots</li> <li>c. Events</li> </ol> </li> <li>4) Week 4 <ol style="list-style-type: none"> <li>a. Layout Managers</li> <li>b. QVBoxLayout</li> <li>c. QGridLayout</li> <li>d. QFormLayout</li> <li>e. QLabel</li> </ol> </li> <li>5) Week 5 <ol style="list-style-type: none"> <li>a. QLineEdit Widget</li> <li>b. QPushButton Widget</li> <li>c. QRadioButton Widget</li> <li>d. QCheckBox Widget</li> </ol> </li> <li>6) Week 6 <ol style="list-style-type: none"> <li>a. QComboBox Widget</li> <li>b. QSpinBox Widget</li> <li>c. QSlider Widget &amp; Signals</li> </ol> </li> <li>7) Week 7 <ol style="list-style-type: none"> <li>a. QMenuBar, QMenu, &amp; QAction Widgets</li> <li>b. QToolBar Widget</li> <li>c. QDialog Class</li> <li>d. QMessageBox</li> </ol> </li> <li>8) Week 8 <ol style="list-style-type: none"> <li>a. QDialogWidget Widget</li> <li>b. QFontDialog Widget</li> <li>c. QFileDialog Widget</li> <li>d. QTab Widget</li> <li>e. QStacked Widget</li> </ol> </li> <li>9) Week 9 <ol style="list-style-type: none"> <li>a. QSplitter Widget</li> <li>b. Multiple Document Interface</li> <li>c. Drag and Drop</li> <li>d. Database Handling</li> </ol> </li> <li>10) Week 10</li> </ol>
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	<ul style="list-style-type: none"> <li>a. Draw API</li> <li>b. QClipboard</li> <li>c. QDock Widget</li> </ul> <p>11) Week 11</p> <ul style="list-style-type: none"> <li>a. QStatusBar Widget</li> <li>b. QList Widget</li> <li>c. QPixmap Class</li> </ul> <p>12) Week 12</p> <ul style="list-style-type: none"> <li>a. QScrollBar Widget</li> <li>b. QCalendar Widget</li> </ul>
Content	<p>Visual programming courses focus on GUI programming techniques using a framework commonly used in the industry based on an existing programming language base. Programming languages such as Python, Java, C, and so on have a GUI framework that can be used to form an interface with multiplatform capabilities.</p>
Examination forms	<p><i>Assignments, Quiz, Simulation, Project (Oral Presentation)</i></p>
Study and examination requirements	<p><i>Assignments 10%, Quiz 25%, Simulation 25%, Project 40%</i></p>
Reading list	<ol style="list-style-type: none"> <li>1. Principles of Visual Programming Systems, S. K. Chang (Ed.), Prentice Hall, 1990 (ISBN 0-13-710765-X).</li> <li>2. Visual Languages and Visual Programming, S. K. Chang (Ed.), Plenum Publishing Company, 1990.</li> <li>3. Visual Programming: Concepts and Implementations, H. Elizabeth, Miami University, 1994.</li> </ol>