<table>
<tr><td>Module designation</td><td>Visual Programming
Indonesian title: Pemrograman Visual
Course code: 8420202004</td></tr>
<tr><td>Semester(s) in which the module is taught</td><td>Semester 1 (First year)</td></tr>
<tr><td>Person responsible for the module</td><td>Coordinator: Evangelista Lus Windiyana Palupi, S.Pd., M.Sc.
Teaching staff: Evangelista Lus Windiyana Palupi, S.Pd., M.Sc.; Shofan Fiangga, S.Pd., M.Sc.; Nurus Saadah, S.Pd., M.Pd.; Nina Rinda Prihartiwi, S.Pd., M.Pd.; Dr. Lestariningsih, M.Pd.</td></tr>
<tr><td>Language</td><td>Indonesian</td></tr>
<tr><td>Relation to curriculum</td><td>Compulsory</td></tr>
<tr><td>Teaching methods</td><td>Lectures, tutorial assignments, and individual study
Media and tools: Slides and LCD projectors, whiteboard</td></tr>
<tr><td>Workload (incl. contact hours, self-study hours)</td><td>(Estimated) total workload: 3 CU × 170 minutes × 16 weeks = 8,160 minutes = 136.00 hours (≈ 4.77 ECTS)
Contact hours: lectures, 3 × 50 minutes per week × 16 weeks = 40.00 hours (class hours per week: 510 minutes = 8.50 hours, including structured activities)
Private study including examination preparation: structured assignments, 3 × 60 minutes per week × 16 weeks = 48.00 hours; independent study, 3 × 60 minutes per week × 16 weeks = 48.00 hours (total 96.00 hours)</td></tr>
<tr><td>Credit points</td><td>3 CU (4.77 ECTS)
1 CU = 170 minutes per week × 16 weeks = 45.3 hours; 1 ECTS = 28.48 hours (144 CU = 229 ECTS), so 1 CU = 1.59 ECTS (UNESA Rector's Decree No. 736/HK/KM/2023).</td></tr>
<tr><td>Required and recommended prerequisites for joining the module</td><td>None</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td>Programme learning outcomes (PLO) addressed:
PLO-7: Demonstrate pedagogical knowledge in designing, implementing and evaluating mathematics learning.
PLO-8: Design, implement and evaluate mathematics learning using IT.
PLO-10: Make decisions based on data/information in completing tasks that are the student's responsibility and evaluating the work that has been done.</td></tr>
<tr><td>Content</td><td>This course examines the basic concepts of visual programming languages and how to use existing tools and software to transform digital-based mathematics learning by producing effective educational media applications and games. Visual design and graphic display are also introduced in this course, which concludes with a project to create an application for mathematics learning.</td></tr>
<tr><td>Examination forms</td><td>Final score is calculated from the weekly assessment scheme below (CLO/PLO addressed and weight of each assessment):
<table>
<tr><th>Week</th><th>CLO</th><th>PLO</th><th>Weight (%)</th></tr>
<tr><td>1</td><td>CLO-1</td><td>PLO-7</td><td>5</td></tr>
<tr><td>2</td><td>CLO-1</td><td>PLO-7</td><td>5</td></tr>
</table></td></tr>
</table>

	3	CLO-1	PLO-7	0
	4	CLO-1	PLO-7	12
	5	CLO-1	PLO-7	0
	6	CLO-1	PLO-7	12
	7	CLO-1	PLO-7	7
	8	CLO-2	PLO-8	7
	9	CLO-2	PLO-8	0
	10	CLO-2	PLO-8	10
	11	CLO-3	PLO-8	0
	12	CLO-3	PLO-8	0
	13	CLO-3	PLO-8	0
	14	CLO-4	PLO-10	14
	15	CLO-4	PLO-10	14
	16	CLO-4	PLO-10	14

Study and examination requirements

Students are considered competent and pass if the final score is at least 55 or C.

Final index (grade conversion):

Index	Converted score	Score range (A = final score)
A	4.00	85 ≤ A ≤ 100
A-	3.75	80 ≤ A < 85
B+	3.50	75 ≤ A < 80
B	3.00	70 ≤ A < 75
B-	2.75	65 ≤ A < 70
C+	2.50	60 ≤ A < 65
C	2.00	55 ≤ A < 60
D	1.00	40 ≤ A < 55
E	0.00	0 ≤ A < 40

Reading list

1. Christodoulou, M., Szczygieł, E., Kłapa, Ł., & Kolarz, W. (2018). Algorithmic and Programming.
2. Kuhlman, D. 2013 . A Python Book: Beginning Python, Advanced Python, and Python Excercises. MIT.
3. Gaddis, T., & Halsey, R. (2014). Starting Out with App Inventor for Android. Pearson addison Wesley
4. McManus, S. (2019). Scratch Programming in Easy Steps. In Easy Steps: Warwickshire. United Kingdom chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.sean.co.uk/downl oads/2017files/Scratch-in-Easy-Steps-PDF-Sampler.pdf
5. Fristanto, S. B., (). Mudah Membuat Game Edukasi dengan Construct SMK Negeri 9 Malang: Malang https://bagus.smkn9malang.sch.id/web/?p=5474 .
6. Lestariningsih, L., & Al Fareza, M. Z. (2024). Prospective Mathematics Teacher Students' Experiences in Visual Programming: Difficulties and Obstacles in Designing Digital Media for Numeracy Learning. Jurnal Pendidikan MIPA, 25(4), 1678-1692.