



MODULE HANDBOOK

Complex Variable Functions

BACHELOR DEGREE PROGRAM
DEPARTMENT OF MATHEMATICS
FACULTY OF SCIENCE AND DATA ANALYTICS
INSTITUT TEKNOLOGI SEPULUH NOPEMBER

	<p>CLO-3 Be able to explain the mapping / transformation by elementary functions and conformal mapping / transformation.</p> <p>CLO-4 Be able to explain the residual theorem and its use to compute the integral complex functions.</p> <p>CLO-5 Be able to investigate series convergence, decompose complex functions in power series, Taylor, Maclaurin and Laurent series.</p>	<p>CLO-03</p> <p>CLO-04</p> <p>CLO-05</p>
Content	<p>This course discusses problems: complex numbers, complex functions / mappings, limits, continuous, derivatives, complex integrals, Green, Cauchy, Morera and Liouville's Theorem, convergence / divergence of sequences and series, singularities, residual theorems and are used in complex integrals, conformal map.</p>	
Study and examination requirements and forms of examination	<ul style="list-style-type: none"> • In-class exercises • Assignment 1,2 • Mid-term examination • Final examination 	
Media employed	<p>LCD, whiteboard, websites (myITS Classroom), zoom.</p>	
Reading lists	<p>Main :</p> <ol style="list-style-type: none"> 1. Churchill, R., "Complex Variables and Applications 8th edition", McGraw-Hill, New York, 2009. 2. Mathews, J.H, "Complex Variables for Mathematics and Engineering", 6th edition, WM C Brown Publiser, Iowa, 2010. <p>Supporting :</p> <p>Poliouras, J.D., Meadows D. S, "Complex Variables for Scientists and Engineers 2nd edition ", New York, 2014.</p>	