

Course Description Form

1. Course Name: Complex Analysis II					
2. Course Code: MATH 412					
3. Semester / Year: First/2023-2024					
4. Description Preparation Date:2023-2024					
5. Available Attendance Forms: Attendance					
6. Number of Credit Hours (Total) / Number of Units (Total)60 hours/4 Units					
7. Course administrator's name (mention all, if more than one name)					
Name: Dr. Iman A. Hussain					
Email: iman a. hussain@nahrainuniv.edu.iq					
8. Course Objectives					
Course Objectives		<p>1–To study integral together with various technique with their derivatives, contour integration and transformations.</p> <p>2–To study complex sequence and series and conformal mappings and Riman sphere.</p>			
9. Teaching and Learning Strategies					
Strategy		Lectures, Homework, some activities in the class, Electronic reference			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-3	12	Integral	Chapter 4	lectures	
4-8	20	Complex sequence	Chapter 5	lectures	
9-11	12	Conformal mapping	Chapter6	lectures	

12-1:	16	Sphere surface	Chapter 7	lectures
11. Course Evaluation				
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports etc				
12. Learning and Teaching Resources				
Required textbooks (curricular books, if any)		1-Complex variables and applications Ruel v. Churchill 2-Complex analysis Theodore		
Main references (sources)		<ol style="list-style-type: none"> 1. Ablowitz, M. J., Fokas, A. S. (2003). <i>Complex variables: introduction and applications</i> (2nd ed). Cambridge University Press. 2. Brown, J. W., Churchill, R. V. (2009). <i>Complex Variables and Applications</i>. 8th Edition. New York: McGraw-Hill Higher Education. 3. Lundmark, H. (2004). <i>Visualizing complex analytic functions using domain coloring</i>. 4. Needham, T. (1997). <i>Visual Complex Analysis</i>. Oxford University Press, Oxford. 		
Recommended books and references (scientific journals, reports...)				
Electronic References, Websites				