

<b>Date:</b>	Examination No.:	Version:2022-2023	Start:1/9/2022
<b>Module Name - Code</b>	Digital Signal Processing - 21208		
<b>Module Language:</b>	English		
<b>Responsible:</b>	Maha George Zia		
<b>Lecture (s):</b>	Maha George Zia		
<b>College:</b>	College of Engineering – Salahaddin University-Erbil		
<b>Duration:</b>	15 week – 1 semester		
<b>Course outcomes:</b>	The course deals with the methods and algorithms concerning Digital Signal Processing. This course is a mandatory requirement for the BSc in Electrical Engineering. As an introductory course, a good treatment of the basic principles is important for a proper understanding of the subject matter and for confidence in applying these principles to practical problem solving.		
<b>Course Content:</b>	<ul style="list-style-type: none"> <li>• Introduction to digital signal processing</li> <li>• Impulse response, linear and circular convolutions</li> <li>• Steady state response</li> <li>• Z. Transform applied to digital signal processing system</li> <li>• Spectral estimation using window functions and FFT</li> <li>• Digital filter design</li> </ul>		
<b>Literature:</b>	<ul style="list-style-type: none"> <li>➤ Jone G. Proakis: <i>Digital Signal Processing</i>, Principles algorithms and applications, 4<sup>th</sup> edition, Pearson, 2007</li> <li>➤ Dick Blandford: <i>Introduction to Digital Signal Processing</i>, 1<sup>st</sup> edition, Pearson, 2012</li> <li>➤ <a href="#">Richard G. Lyons</a>: <i>Understanding Digital Signal Processing</i>, 3rd Edition, Prentice Hall, 2010.</li> </ul>		
<b>Type of Teaching:</b>	3 hrs. in lectures + 2 hours practical		
<b>Pre-requisites:</b>			
<b>Frequency:</b>	Fall Semester		
<b>Requirements for credit points:</b>	For the award of credit points, it is necessary to pass the final exams of the theoretical and practical (Lab) exams. Also, it contains quizzes, and assignments during the academic semester. <b>Student's attendance is required in all classes.</b>		
<b>Credit point:</b>	6		
<b>Grade Distribution:</b>	<p><b>1-The Theoretical part is based on the following (total mark= 75%):</b></p> <ul style="list-style-type: none"> <li>a) Two quizzes during the academic semester = 20%.</li> <li>b) Two assignments (homework) = 15%.</li> <li>c) Final theoretical exam = 40%</li> </ul> <p><b>2- The practical (Lab) part is based on the following (total mark= 25%):</b></p> <ul style="list-style-type: none"> <li>a) Reports, and quizzes and = 15%</li> <li>b) Final practical exam= 10%</li> </ul>		
<b>Work load:</b>	The workload is 75 hrs. It is the result of 45 hrs. theoretical and 30 hrs. practical attendance, both concerning(Assignments, preparation for exam and applications).		

