

<b>Course Detail Information</b>	
<b>Course Number:</b>	1051-713
<b>Course Name:</b>	NOISE AND RANDOM PROCESSES
<b>Course Title:</b>	NOISE & RANDOM PROCESSES
<b>Course Description:</b>	The purpose of this course is to develop an understanding and ability in modeling noise and random processes within the context of imaging systems. The focus will be on stationary random processes in both one dimension (time) and two dimensions (spatial). Power spectrum estimation will be developed and applied to signal characterization in the frequency domain. The effect of linear filtering will be modeled and applied to signal detection and maximization of SNR. The matched filter and the Wiener filter will be developed. Signal detection and amplification will be modeled, using noise figure and SNR as measures of system quality. At completion of the course, the student should have the ability to model signals and noise within imaging systems. Also offered online. (1051-716, 718, 719 or permission of instructor) Class 4, Credit 4 (S)
<b>Credit Hours:</b>	4
<b>Course Notes:</b>	
<b>Section Types Offered:</b>	Lecture
<b>Replaces Course:</b>	<b>2051-713</b>
<b>Future Term Offerings:</b>	<i>No future term offerings currently available.</i>