

<b>COURSE TITLE</b>	<b>TE142329: Advanced Signal Processing</b> Credits: 3 Semester: III
<b>LEARNING OBJECTIVES</b>	To have a capability of applying signal processing techniques and signal analysis for non-stationary signal, and to have a skill in designing a software system for time-frequency analysis.
<b>COMPETENCY</b>	<ul style="list-style-type: none"> <li>• To have an understanding of principles of signal generation and signal modeling.</li> <li>• To have an understanding of noise reduction techniques using linear and nonlinear digital filter, to have a capability of realizing them in practical applications.</li> <li>• To have an understanding of theory of optimal filter and adaptive filter, and to have a capability of realizing of them in practical applications.</li> <li>• To have an understanding of time-frequency analysis: short-term Fourier Transform, Continuous Wavelet Transform, signal decomposition based on Discrete Wavelet Transform.</li> </ul>
<b>SUBJECTS</b>	<ul style="list-style-type: none"> <li>• Signal modeling</li> <li>• Linear filter</li> <li>• Nonlinear filter</li> <li>• Optimal filter</li> <li>• Adaptive filter, time-frequency analysis, studi kasus dan praktek pemrosesan dan analisa sinyal stasioner dan nonstasioner. analysis of non-stationary signals.</li> </ul>
<b>MAIN REFERENCES</b>	<ul style="list-style-type: none"> <li>• Proakis &amp; Manolakis, <u>Digital Signal Processing</u>, PH, 1996.</li> <li>• Manolakis, et. al., <u>Statistical and Adaptive Signal Processing</u>, MH, 2000.</li> </ul>
<b>OPTIONAL REFERENCES</b>	Selected scientific journals in signal processing
<b>PREREQUISITE</b>	-