**Subject Title:** Speech and Image Processing  
**Subject Code:** EIE421 (for 42070, 42077 and 42078)  
**Number of Credits:** 3  
**Hours Assigned:**  
| Lecture/Tutorial | 33 hours |  
| Laboratory       | 9 hours   |

**Pre-requisite:** For 42070 and 42078  
Digital Signal Processing (EIE413)  
For 42077  
Signal Processing Fundamentals (EIE327)  
**Co-requisite:** nil  
**Exclusion:** Video, Image, and Audio Processing (EIE425)

**Objectives:**
1. To provide students with basic concepts of speech and image processing.
2. To provide students with the principles of speech and image coding.
3. To explain the technologies behind speech and image recognition systems.

**Keyword Syllabus:**
Fundamentals of speech science; speech production models; short-term processing of speech; linear prediction analysis; speech coding and its applications; Speech recognition; Image processing; digital image representation and visual perception; image transforms; image enhancement; image filtering and restoration; image coding and compression techniques.

**Method of Assessment:**
Coursework: 40%  
Examination: 60%

**Textbooks:**

**References:**