

Sir Syed University of Engineering and Technology
BS EL/CE/EE/TE Program
List of Course Project
EL-312L Digital Signal Processing

- Audio compression
- Face recognition
- Microphone array signal processing-based projects
- ECG signal analysis for heartbeat classification
- Noise cancellation in speech signals using digital filters
- Design and implementation of a digital audio effects processor
- Image compression using discrete cosine transform (DCT)
- Biometric authentication system using fingerprint recognition
- Analysis of EEG signals for human-computer interfaces
- Audio watermarking for copyright protection
- Radar signal processing for target detection and tracking
- Motion detection and tracking in video sequences
- Audio source localization
- Speech enhancement
- Active noise cancellation
- Feedback cancellation
- Echo cancellation
- Audio source separation
- Impulse noise cancellation
- Dereverberation algorithms
- Image denoising
- Image restoration
- Image Segmentation
- Video compression
- Real-time audio equalizer using digital filters
- Speech recognition system for automatic transcription
- Musical instruments tuning using FFT

Dear students,

Please note that the provided list of project titles for the "Digital Signal Processing" course is intended to present you with a general overview of potential project areas and the associated algorithms or methods. It is expected that you will further refine and finalize your chosen project by delving into the specific details, implementation aspects, and potential extensions of the selected topic. This process will involve conducting in-depth research, exploring relevant literature, and consulting with your instructor to tailor the project to your interests and learning objectives. Remember that this project offers an opportunity for independent exploration and creativity within the realm of digital signal processing **Complex Engineering Activity (CEA)**.