

# ASK, FSK, PSK LAB EXERCISE IN MATLAB

EEEN 464 – DIGITAL COMMUNICATION

Tuesday, June 3, 2025

# MATLAB CODE FOR DIGITAL MODULATION USING ASK, FSK AND PSK (1)

```
f=5;
f2=10;
x=[1 1 0 0 1 0 1 1]; % binary input signal
nx=size(x,2)
i=1;
while i<nx+1
    t = i:0.001:i+1;
    if x(i)==1
        ask=sin(2*pi*f*t);
        fsk=sin(2*pi*f*t);
        psk=sin(2*pi*f*t);
    else
        ask=0;
        fsk=sin(2*pi*f2*t);
        psk=sin(2*pi*f*t+pi);
    end
end
```

# MATLAB CODE FOR DIGITAL MODULATION USING ASK, FSK AND PSK (2)

```
subplot(3,1,1);  
    plot(t,ask);  
    hold on;  
    grid on;  
    axis([1 8 -1 1]);  
title('Amplitude Shift Keying')  
subplot(3,1,2);  
    plot(t,fsk);  
    hold on;  
    grid on;  
    axis([1 8 -1 1]);  
title('Frequency Shift Keying')
```

# MATLAB CODE FOR DIGITAL MODULATION USING ASK, FSK AND PSK (3)

```
subplot(3,1,3);  
plot(t,psk);  
hold on;  
grid on;  
axis([1 8 -1 1]);  
title('Phase Shift Keying')  
  
i=i+1;  
end
```

# MATLAB CODE FOR DIGITAL MODULATION USING ASK, FSK AND PSK (4)

