## Week # 4 - Topics

- § 1.1 Abstract vector spaces; common vector spaces:  $\mathbb{R}^n$ ,  $\mathbb{R}_n$ , M(m,n),  $\mathcal{P}_n$ ,  $\mathcal{P}$ ,  $\mathcal{C}(I)$ ,  $\mathcal{C}^k(I)$ ,  $\mathcal{C}^{\infty}(I)$ ,  $\mathcal{F}(\mathbb{R})$ .
- § 1.4 Subspaces; Subspace Theorem; NOT a Subspace Theorem; special subspaces associated with  $m \times n$  matrix A: Null Space, Column Space, Row Space.

## **Chapter Summary**