CHAPTER V

CONCLUSION AND FUTURE WORK

This thesis put an emphasis on simulations and implementations pertinent to digital modem communication, which is designed to be used in digital laboratory for undergraduate students. This thesis contains MATLAB simulations and implementations on C6711 DSK in experiment 1-4 and experiments 5-6, respectively.

We describe components and how to use the experiments in chapter 3 and chapter 4. Therefore, this chapter will give the conclusion and outcomes of the whole thesis which can be applied as a laboratory instruction for teaching.

COURSEWARES ON DIGITAL MODEM USING C6711 DSK	
EXPERIMENTS	**OUTCOMES**
PART A: SIMULATION ON MATLAB	
Experiment 1 * Fourier Series * PN Bit Generator * Convolution	* Learn to analysis signal and linear time invariant system. * Understand basic data random generation
Experiment 2 * Line coding * Autocorrelation	* Learn to use an appropriate line code signal for a particular type of communication channel.
Experiment 3 * NRZ Rectangular * Raised-Cosine * Root-RC	* Learn how to analysis the spectral characteristics of the transmitter signal. * Learn how to analysis impulse of the transmission scheme.

PART B: SIMULINK	

Experiment 4
     *   Introduction to Simulink
     *   BPSK
     *   QPSK
	* Learn how to use Simulink
	 *Understand the BPSK and QPSK digital communication system, and learn to observe signal on simulation diagram.
	 *be able to evaluate performance of the system.

PART C: IMPLEMENTATION ON C6711 DSK	

Experiment 5
     *   C6711 DSK Testing
     *   Create Project
     *   Code Generation and Option
     *   Necessary Files
	* Introduction to the use of C6711 DSK equipment in its software and hardware aspects.
	 * Learn how to build a project and some necessary files which must have to create a project.

Experiment 6
     *   Sine Wave Generating
     *   BPSK Transmitter and Receiver With PLL on Single DSK
     *   Phase Lock Loop
	* Introduction to the use of the C6711 DSK on real signal generating.
	 * Understand how to implement the loop back system on one DSK.
	 * Learn bout the important synchronization, which can implement on DSK.

Experiment 7
     *   BPSK Modulation
     *   QPSK Modulation
	* Learn how to generate the transmitted signal on C6711 DSK.
	 * Understand how to use support and library function of the C6711 DSK chip support.

Table 1 Digital MODEM Experiment Goals And Learning Outcomes.

Future Work

In conclusion, this work still has certain facets on which further improvement can be made for more efficiency in teaching material. In order to improve the courseware, there should be evaluation from undergraduate students who use this courseware as study equipment in their actual learning. The feedback receiving from students would be the most useful and reliable information for making this courseware more appropriate for being implemented in real study environment.