

CENG4480

Filter Lab 3:

Tutorial Session

Xiangjun Peng

xjpeng@cse.cuhk.edu.hk

<https://shiangjun.cn>

Memory and Storage System Research Group

Last Edited in October 15th 2020



香港中文大學

The Chinese University of Hong Kong

Outline

- **Introduction & Overview**
- **Objectives & Expected Outcome**
- **Assignments & Guidelines**
- **Demonstrations**

Intro. & Overview

- **Recap the Contents:**
 - **Filters** [Lec. 3]
- **Hence, the Main Focus would be**
 - **Hands-on Experiments on Operational Amplifiers**
- **We would cover FIVE major designs**
 - **Through the TINA Simulator** as well
- **These FIVE designs are more advanced:**
 - **So we would hopefully DEMO all of them**
 - **A Good Option** is to follow the demonstrations

Obj. & Exp. Outcome

- **The Purpose of Labs:**
 - **Getting Your Hands Dirty**
- **Hence, I won't help you beyond the detailed guidelines**
 - **Take a Deep Breadth & Follow the Report**
 - **I would show you a way through concrete examples.**
- **Expected Deliverables**
 - **U have 10 days to finish this (DDL: 23:59, Oct. 25)**
 - **A Report, which consists of**
 - **FIVE** Relevant Simulations
 - In total, we have **SEVEN** tasks.

Assignments & Guides

- **FIVE Experiments:**
 - One-pole low pass filter (Sec. 2)
 - Two-pole low pass filter (Sec. 3)
 - **High pass filter** (Sec. 4)
 - **Band stop (notch) filter** (Sec. 5)
 - **Op-amp multivibrator** (Sec. 6)
- **All Materials have been Covered**
- **Guidelines:**
 - **Use Lab 1&2 Materials for these Assignments**
 - **Similar Procedure, with Different Configurations**

CENG4480

Filter Lab 3:

Tutorial Session

Xiangjun Peng

xjpeng@cse.cuhk.edu.hk

<https://shiangjun.cn>

Memory and Storage System Research Group

Last Edited in October 15th 2020



香港中文大學

The Chinese University of Hong Kong