Rubric for Prelab Planning Document (20 pts)

Purpose:
Students should be able to work through laboratories from their project management document quickly and efficiently.

Format
1 – 2 pages (For labs that have many steps or steps that can be broken up between team members, tasks can be combined to keep the document concise. For example: Task 1: Steps 1 – 3, Team member 1: Step 1, Team Member 2: Step 1, Team Member 3: Step 3, Team Member 4: Step 2)

10 – 12 font in Arial, Calibri, or Times New Roman

0.5 – 1” margins

Signature Line stating that all students have read and participated in the creation of this document

General Considerations (5 pts):

General legibility (2 pts)

General organization (1 pts)

Signatures (2 pts)

Pre-lab Specific considerations (15pt):

Restatement of objective that demonstrates understanding of lab (5 pts)

Statement of major tasks to be completed in lab period (5 pts)

Assignment of major tasks to team members (all members accounted for) (5 pts)
Group: ____________________________

Lab Time: ____________________________

Instructor: ____________________________

Objective: To complete laboratory one on generic lab chip testing. This lab is to better understand the basics of microfluidic flow.

Team Members (TM#):

TM1: ____________________________  TM2: ____________________________ (recorder)

TM3: ____________________________  TM4: ____________________________

Step 1:
   TM1: Preparing table space with TM2
   TM2: Preparing table space with TM1
   TM3: Prepping lab notebook
   TM4: Collecting Materials

Step 2:
   TM1: Wash chips with water and soap
   TM2: Dries the chips with KimWipes
   TM3: No assigned tasks; assisting TM1 and TM2
   TM4: Recording any pertinent comments; assisting where needed

Step 3:
   TM1: Assisting TM3
   TM2: Assisting TM3
   TM3: Alignment of chips
   TM4: Recording of alignment procedure

Step 4:
   All members will discuss flow and channel design for 5 minutes. TM3 to record.

Step 5:
   TM1: Trim the PDMS lid if needed using Xacto knife or small blade
   TM2: Assisting
   TM3: Assisting
   TM4: Assisting

Step 6a –d: Each team member will be given a chance to pump liquid through the channels. The rotation will be according to the following pattern, during this time I will be holding the chip lid with even pressure.

1. TM1 (Channel A)
2. TM3 (Channel B)
3. TM4 (Channel C) – TM3 to record during this step
4. TM2 (Channel D)

Step 7:
- TM1: Cleaning up extra materials
- TM4: Cleaning up extra materials
- TM2: Drying chips with kim wipes
- TM3: Assist with cleaning

Step 8: Each member will examine the chip for damage and debris using the 5x magnifier recording their own results. A compiled list of results will be recorded by TM4.

Steps 9 – 15 to be completed outside of lab.

I have read the instructions for laboratory _____ and participated in the writing of this document. I have read the final version and understand my obligations to participate in the laboratory for which it was written.

__________________________________________  ______________________________________

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