

## ABEN 263 Lab Plan for Spring 2020 (Last updated: January 10, 2020)

Blue shading: days requiring assistance from Ibuk and/or Sanaul or Sagar

M=Monono, I=Ibukunoluwa, SH=Sanaul, and SR=Sagar

Tentatively, Tuesday's labs in the Pilot Plant will be 12:30 to 5 p.m. (three 90 min groups). Each group consists of 3-4 students. We have 19 students enroll now. We will only need a Thursday lab section if we have >24 students enrolled.

1. Jan. 14: Course introduction; course pre-test (in Pilot Plant)
2. Jan. 21: Quality evaluation of canola seed (in Pilot Plant) **M, I, SH**
3. Jan. 28: Mass balance for screw pressing of canola oil (in Pilot Plant) **M, I**
4. Feb 4: Spreadsheet software for problem and data analysis (in ABEN 210 cluster)
5. Feb. 11: 1<sup>st</sup> test (bring calculator; ABEN 215 beginning 2 p.m.)
6. Feb. 18: Fluid properties of soup concentrates and biodiesel (in Pilot Plant) **M, I**
7. Feb. 25: Process plant tour (meet on E. side of ABEN building)
8. Mar 3: Thermal energy balance on evaporator (in Pilot Plant) **M, SH**
9. Mar. 10: 2<sup>nd</sup> Test (bring calculator; ABEN 215 beginning 2 p.m.)  
NDSU Spring Break (March 16-20)
10. Mar. 24: Mid-course review & assessment (Pilot Plant beginning 2 p.m.)
11. Mar 31: Process plant tour (meet on E. side of ABEN building)
12. Apr. 7: Double pipe heat exchanger (in Pilot Plant) **M, I**
13. Apr. 14 (*follows Easter weekend*): 3<sup>rd</sup> test (bring calculator; ABEN 215 beginning 2 p.m.)
14. Apr. 21: Dataloggers and "Hot Box" Event (in ABEN 210 cluster) **M, SR**
15. Apr. 28: Programmable logic controllers in processing (in ABEN 210 cluster) **M, SR**
16. May 5: Lab period this week will be for any needed makeup for weather cancellation