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Zoe Maisel's Individual Contribution Page

Fall 2016 Contributions

This semester, I am on the Anaerobic Fluidized Bed (AFB) team and will be continuing the Wastewater team's work to develop anaerobic treatment strategies for low strength wastewater. Using reactors designed and built last semester, my team will be working to address operational problems to get the reactors running again. Operational problems last semester included granule plug formation and overflow, so addressing those issues first is of most importance. Once the plug problem is figured out, the team will inoculate and run the reactors for experimental testing. COD removal, methane production, and pH levels in the reactors will be of most interest this semester, with the goal of quantifying reactor performance. Additionally, this semester I am a Team Lead and a Research Adviser for the UASB team.

Spring 2016 Contributions

I worked on the new Expanded Granular Sludge Bed (EGSB) wastewater subteam and designed new reactors that create a fluidized bed to increase granular sludge contact with wastewater. The goal of the subteam was to lower HRT while raising SRT, so our semester involved designing new reactors, constructing them, inoculating them, and then conducting experimental tests to measure COD, methane production, and sludge bed concentration.

Fall 2015 Contributions

I worked on restarting the Upflow Anaerobic Sludge Bed (UASB) reactors as part of the anaerobic wastewater subteam. Previous teams built UASB reactors that we inspected, tested, and replaced parts on as needed. A majority of the semester was spent identifying and quantifying leaks in the reactors. Once they were inoculated, COD and methane production was tested using a variety of different methods. The main outcome of the semester was recognizing the need to construct new, tabletop reactors.