# CHEM 304: Organic Chemistry Laboratory

*(Sections 001-004)*

**Fall 2019**

# Schedule of Experiments

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Week of** | **Experiment** |  | **Assignment Due** |  | **Analysis** |
|  |  |  |  |  |  |
| Aug. 19 | **NO LABS** |  | **-------** |  |  |
|  |  |  |  |  |  |
| Aug. 26 | Introduction and Molecular Modeling\* |  | **-------** |  |  |
|  |  |  |  |  |  |
| Sept. 2 | Recrystallization and Melting Point (T) |  | *Molecular Modeling\** |  | mp |
|  |  |  |  |  |  |
| Sept. 9 | Extraction of Caffeine (T) |  | *Recrystallization* |  | GC-MS |
|  |  |  |  |  |  |
| Sept. 16 | Distillation and Gas Chromatography (T) |  | *Extraction* |  | GC |
|  |  |  |  |  |  |
| Sept. 23 | TLC (T) |  | *Distillation* |  |  |
|  |  |  |  |  |  |
| Sept. 30 | Column Chromatography (T) |  | *TLC* |  |  |
|  |  |  |  |  |  |
| Oct. 7 | Friedel-Crafts Acylation (R) |  | *Column* |  | 1H-NMR, IR |
|  |  |  |  |  |  |
| Oct. 14 | **NO LABS – Fall Break** |  | **-------** |  |  |
|  |  |  |  |  |  |
| Oct. 21 | Grignard Reaction (R) |  | *Acylation* |  |  |
|  |  |  |  |  |  |
| Oct. 28 | Grignard Reaction |  | **-------** |  | IR, mp |
|  |  |  |  |  |  |
| Nov. 4 | Fischer Esterification (R) |  | *Grignard* |  | 13C-NMR |
|  |  |  |  |  |  |
| Nov. 11 | Aldol Condensation (R) |  | *Fischer* |  | 1H-NMR, mp |
|  |  |  |  |  |  |
| Nov. 17 | Hydrogenation of Olive Oil (R) |  | *Aldol* |  | 1H-NMR |
|  |  |  |  |  |  |
| Nov. 25 | **NO LABS - Thanksgiving** |  | **-------** |  |  |
|  |  |  |  |  |  |
| Dec. 2 | **NO LABS** |  | *Hydrogenation* |  |  |

\* The modeling assignment is not a lab report and does not follow the report guidelines.

(T) – Denotes Technique Experiment

(R) – Denotes Reaction Experiment