

ENGR 130 MATLAB Style Guide

You are expected to follow a common style for code written in ENGR 130. Writing clearly readable code is an essential part of programming. Other code styles may be used for other classes or in organizations you work for, but the style taught here will start you off with good habits. We expect you to adhere to these guidelines during your time in this course. Points will be deducted from homework assignments or lab reports that do not follow this style guide.

Comments:

- Begin all script files with a header containing name(s), assignment, section, and date of submission (see example below).
- Explanatory comments should be placed regularly throughout the code (but not on every line) to succinctly explain what the code is doing.

Conventions:

- Use a new section (by typing a double percent sign character ‘%%’) for each homework problem or lab report section.
 - Begin each section with `clear; clc; close all;`
- Suppress all output with `;` unless told otherwise.
- Use descriptive variable names (e.g. `radius` instead of `r`).
- Properly indent `if`, `for` and `while` statements.
 - MATLAB has an automatic indentation feature (green square icon) in the Editor tab.
- Use blank lines when necessary to make your code more readable.
 - Lines of code closely related to one another should likely be single spaced.

This module report format adheres to our conventions:

```
% Kathy Harper, Kurt Rhoads, James Schmidt
% ENGR 130 Module 0 Report
% Section ####
% January 1st, 2023
```

```
%% Lab 1
clear;
clc;
close all;
```

```
% Part 1: Assign values to radii of each circle in cm
radius_1 = 5.0;
radius_2 = 7.5;
```

```
% Part 2: Calculate the area of each circle
area_1 = pi * radius_1^2;
```

```
area_2 = pi * radius_2^2;
```

```
%% Lab 2
```

```
clear;
```

```
clc;
```

```
close all;
```

```
% Part 1: Display the area of each circle, properly labeled
```

```
fprintf('The area of a circle radius of %f is %f.\n', radius_1, area_1);
```

```
fprintf('The area of a circle radius of %f is %f.\n\n', radius_2, area_2);
```

This homework format adheres to our conventions:

```
% Kathy Harper
```

```
% ENGR 130 Homework 1
```

```
% January 1st, 2023
```

```
%% Problem 1
```

```
clear;
```

```
clc;
```

```
close all;
```

```
disp("Hello world!")
```

```
%% Problem 2
```

```
clear;
```

```
clc;
```

```
close all;
```

```
% Print squares of the numbers from 1 to 5
```

```
for num = 1:1:5
```

```
    num_squared = num^2;
```

```
    fprintf('The square of %i is %i.\n', num, num_squared);
```

```
end
```