

ME35401  
Spring Calculator  
Sydney Free & Yağmur Önder

### 1. Code spreadsheet

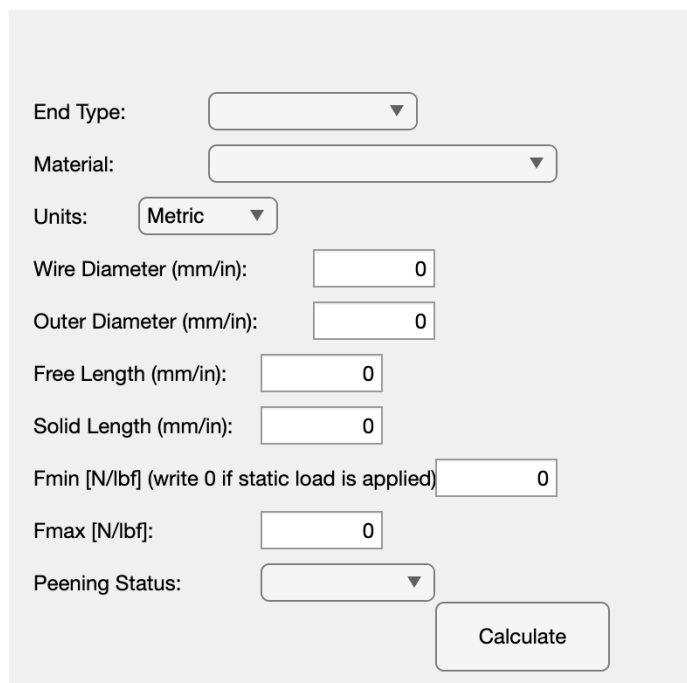
See the following pdf for all the code. For practical purposes, the code was organized with multiple files to be able to troubleshoot different functions with the unique calculations. For submission purposes, all the code and functions were copied into one script.

### 2. Calculator Demonstration

*Demonstrated in class with TA Wenxi Chen on Dec 07<sup>th</sup>.*

### 3. GUI extra credit

GUI is shown below where user can provide inputs as well as inform the calculator of either metric or english units.



The image shows a graphical user interface (GUI) for a spring calculator. It features several input fields and dropdown menus for specifying parameters. The parameters include End Type, Material, Units (set to Metric), Wire Diameter (mm/in), Outer Diameter (mm/in), Free Length (mm/in), Solid Length (mm/in), Fmin [N/lbf] (with a note to write 0 if static load is applied), Fmax [N/lbf], and Peening Status. A Calculate button is located at the bottom right of the input area.

Parameter	Value
End Type:	[Dropdown]
Material:	[Dropdown]
Units:	Metric [Dropdown]
Wire Diameter (mm/in):	0
Outer Diameter (mm/in):	0
Free Length (mm/in):	0
Solid Length (mm/in):	0
Fmin [N/lbf] (write 0 if static load is applied)	0
Fmax [N/lbf]:	0
Peening Status:	[Dropdown]

Calculate