**Week 1:**

* Arithmetic (calculator)
* Types
* Variables, Expressions and Statements
* String operations
* Functions (converting, definition, parameters and arguments)
* Loops
* Built-in functions
* importing libraries
* Fruitful functions (functions that return a value)
* return and assignment of multiple values
* Boolean expressions
* Relational operators
* Logical operators
* if statements

**Week 2:**

* Variable scope
* Hidding variables
* Scope of function arguments
* Global : assigning to variables in outer scope
* Functions : positional, optional, keyword arguments
* Stack diagrams
* Stack traces
* Debugging
* Recursion
* Factorial
* Fibonacci
* String formatting
* Stings searching and counting
* The in operator
* String methods
* Lists
* Aliasing
* Revisiting scoping and lists
* Lists methods
* List traversal
* Iteration
* break statement
* Strings (slicing)

**Week 3:**

* Dictionaries
* Using dictionaries
* Default dictionaries (defaultdict)
* Tuples

**Week 4:**

* Set
* List comprehensions
* Zip, enumerate tuples, lists and dictionaries
* Random nummers
* Files
* Storing data persistently
* Pickling
* Formatting strings / alignment / precision

**Week 5:**

* NumPy
* Numpy arrays
* concatenating arrays
* Indexing and slicing and splitting
* Changing values in arrays
* Boolean indexing
* Mathematical and Statistical functions
* Universal functions: Fast element-wise array functions
* Methods on boolean arrays and conditional logic
* Operations on arrays
* Sorting and finding uniques
* matrixes
* Matplotlib
* Interactive plots
* Bar plots
* Pie chart
* Stacked bar plot with error bars
* Plotting functions

**Week 6:**

* Pandas
* Series
* Accessing series
* Filtering and Functions
* NaN values
* Assignment
* DataFrame (creating, accessing, filtering,assignment)
* Arithmetic
* Sorting and rank
* Handling missing data
* Data reading /Writing
* Data Wrangling (merge, concat)
* Plotting

**Week 7:**

* DateTime
* groupby
* Debugging