TOPIC 3	**Array indexing and manipulation** **Introduction to writing script files**
SUB-TOPICS	▪ indexing arrays and subarrays ▪ the colon operator (:) and the end keyword ▪ linear indexing of matrices ▪ rearranging array elements ▪ overview of basic statistical functions (i.e. functions operating along rows or columns) ▪ displaying variables using the disp function ▪ writing and running script files (with user input) ▪ creating scripts for plotting
OBJECTIVES	by the end of this unit, students should be able to: - index and overwrite subarrays - delete multiple rows and columns of an array at once - understand the relationship between linear indices and subscripts - rearrange array elements using MATLAB built-ins (e.g. reshape) - interpret the output of column-wise/row-wise operating functions (e.g. min, max, sum, mean, sort) - create script files to solve basic computational problems - create script files for plotting
KEY WORDS AND EXPRESSIONS	see vocabulary lists on MOLE
CORE STUDY MATERIALS	- Textbook selection - Summary Notes - Topic 3 Problems in Question Bank - Vocabulary Lists - Function links on MOLE
TEXTBOOK STUDY	**Essential Reading** Chapter 1 (Introduction): - Section 1.2.1 (The Editor) - Section 1.3 (Sample program) Chapter 6 (Matrices): - Sections 6.1.1 – 6.1.11 (Matrix indexing, matrix functions) - Section 6.2 (Matrix operations) Also revisit (as needed): Sections 1.1.5-1.1.6, Sections 2.1 – 2.6 **Recommended Reading** - Chapter 9 (MATLAB Graphics): Sections 9.1 and 9.2
ADDITIONAL RESOURCES	check on MOLE