M1 – Basics of complex Numbers

m1-LearningOutcomes, m1-warmup, m1-background, m1-imaginary-numbers, m1-quiz-1.1, m1-quiz-1.1-interactive, m1-complex-numbers, m1-operations-complex, m1-quiz-1.2, m1-quiz-1.2-interactive, m1-quiz-1.3-interactive, m1-summary

M2 - Properties of Complex Numbers

m2-LearningOutcomes, m2-background, m2-properties, m2-propertiesContd, m2-quiz-2.1, m2-quiz-2.1-interactive, m2-modulusConjugation, m2-quiz-2.2, m2-quiz-2.2-interactive, m2-summary

M3 – Complex Numbers on a Plane

m3-learningOutcomes, m3-cartesianRepresentation, m3-polarRepresentation, m3-multiplicationPolar, m3-quiz-3.1, m3-conclusions

M4 - Complex Vector Spaces

m4-LearningOutcomes, m4-Background, m4-OperationsComplexVectors, m4-AdditiveIdentityInverse, m4-quiz-4.1, m4-quiz-4.1-interactive, m4-ComplexVectorSpaces, m4-MatricesComplexVectorSpaces, m4-PropertiesTransposeConjugateDagger, m4-Quiz-4.2, m4-Quiz-4.2-interactive, m4-MatrixMultiplication, m4-IdentityMatrix, m4-PropertiesMatrixMultiplication, m4-Quiz-4.3, m4-Quiz-4.3-interactive, m4-Conclusions

M5 - Complex Vector Spaces: Linear Combination, Independence, Basis and Dimensions

m5-LearningOutcomes, m5-LinearDependenceIndependence, m5-ExamplesLinearDependenceIndependence,

m5-Quiz-5.1, m5-Quiz-5.1-interative, m5-Basis, m5-Dimension, m5-Quiz-5.2, m5-Quiz-5.2-interative, m5-TransitionMatrices, m5-Quiz-5.3, m5-Quiz-5.3-interative, m5-Conclusions

M6 – Properties and Operations on Vectors and Matrices in Complex Vector Spaces

m6-LearningOutcomes, m6-InnerProduct, m6-PropertiesInnerProduct, m6-ExamplesInnerProduct, m6-Quiz-6.1, m6-Quiz-6.1-interactive, m6-NormVector, m6-Quiz-6.2, m6-Quiz-6.2-interactive, m6-OrthogonalVectors,

m6-OrthogonalBasis, m6-Projection

M7- Advanced Concepts in Complex Vector Spaces

m7-LearningOutcomes, m7-EigenvaluesEigenvectors, m7-DefinitionEigenvectorsEigenvalues, m7-HermitianMatrices, m7-Quiz-7.1, m7-Quiz-7.1-interactive, m7-UnitaryMatrices, m7-ImplicationUnitaryTransformations, m7-Quiz-7.2, m7-Quiz-7.2-interactive

M8 – Overview of Tensor Analysis

m8-LearningOutcomes, m8-TensorProduct, m8-JointBasis, m8-ExamplesTensorProduct, m8-ExampleTensorProductComplex, m8-Quiz-8.1, m8-Entanglement, m8-TensorProductMatrices, m8-ExamplesTensorProductMatrices, m8-PropertiesTensorProductMatrices