(1) **KodKursus :** **KKKM4583**
Course Code :

(2) **Nama Kursus:** **Mekanik dan PemprosesanKomposit**
Course Title : *Mechanics and Processing of Composite*

(3) **Tarafkursus:** **Jabatan (Pilihan)**
Course definition : *Department (Elective)*

(4) **Sinopsis:**
Synopis :

Matlamat kursus ini ialah memberikan pengetahuan kepada pelajar dalam bidang mekanik dan pemprosesan komposit. Topik-topik yang diajar meliputi sifat konsep asas pemprosesan komposit, peranan matriks dan tetulang, kaedah pemprosesan bahan komposit secara manual dan automatik dan keselamatan dan penjagaan komposit. Analisis makro mekanik dan mikro mekanik lamina komposit bertetulang fiber berterusan dan tak berterusan. Analisa makro mekanik laminat dan ciri-ciri tegasan-terikan komposit bertetulang gentian. Pelajar akan diberikan contoh tertentu di dalam kejuruteraan dan implikasi terhadap rekabentuk. Projek yang melibatkan pemilihan bahan komposit serta pemilihan kaedah pemprosesan yang bersesuaian akan diberikan

The aim of this course is to provide knowledge to students in mechanics and composite processing. It covers basic concepts of the composite processing, the role of the matrix and the reinforcement, composite material processing methods by manual and automatic, and safety. Macro and micro mechanical analysis mechanics. Macro-mechanical analysis of the laminate and the characteristic of stress-strain fiber-reinforced composites. Students will be given a specific example in the engineering and implications on the design. Projects that involving the selection of composite materials and the selection of appropriate processing methods will be given.

(5) **Pra-keperluan(jika ada)**:
Pre-requisite (if any) :

KKKM1513 Sains Bahan
KKKM1513 Material Science

KKKM2344 Mekanik Bahan
KKKM2344 Mechanics of Material

(6) BacaanAsas:
References:

Autar, K. K., 2005, *Mechanics of Composite Materials*, 2nd Edition, CRC Press.
Daniel and Ishai, 2005, *Engineering Mechanics of Composite Materials* , 2nd Edition, Oxford University Press.
Christensen, R. M., 2005, *Mechanics of Composite Materials*, Dover Publications.
Jones, R., 1999, *Mechanics of Composite Materials (Materials Science & Engineering Series),* Taylor & Francis..
Hyer, M.W., 2008, *Stress Analysis of Fiber-Reinforced Composite Materials*, McGraw-Hill International Editions