理学院（数学与应用数学专业）课程简介

课程编号：1713001240

课程名称：可拓数学

学分/学时：2/32

先修课程：数学分析/高等代数

适用专业：数学类专业

课程性质：限选

教　　　材：自编课件, 2017 年.

主要参考书 ：杨春燕，蔡文著，《可拓工程》，科学出版社，2007。

内容简介：《可拓数学》是高等学校应用数学、信息与计算科学、计算机科学、自动控制、信息与系统工程等专业本科二、三年级的一门基本理论方法课，其先修课程为《数学分析》或《高等数学》。本课程意在加强可拓数学的基本理论和基本方法。本课程内容包含基元理论、可拓集合和可拓逻辑三部分。基元理论主要包括基元的概念、事物的基元表示、可拓分析和可拓变换；可拓集合主要包括可拓集合的定义和运算、可拓域、可拓关系、距和关联函数；可拓逻辑主要包括基元的逻辑运算、可拓推理、命题和推理句的基元表示。

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Course Description

School of Science Faculty

Course Code：1713001240

Course Name：Extenics Mathematics

Credit/Hours：2/32

Textbooks：Self-made course ppt, 2017.

Reference Books：Yang Chunyan, Cai Wen. 《Extenics Engineering》. Press of Science, 2007..

Course Description：EXTENICS MATHEMATICS is a fundamental theory and method course for the second-year or third-year undergraduates with a good background in advanced mathematics or mathematical analysis whose specialties belong to applied mathematics, information and computation science, computer science, automatic control, information and systems engineering and so on. The course is designed for undergraduates aiming to improve the related students resolving problems of contradiction. The course covers a wide range of the basic theories and foundational knowledge including The basic-element theory, extenics set, extenics logic which constitute the theory framework of extenics mathematics. Mainly, Basic-element theory involves the concept of basic-element, the expression of objects with basic-element, extenics analysis and extenics transformation while Extenics set includes the definition of extenics set, the operation of extenics set, extenics domain, extenics relation, distance, correlation function. Mostly, Extenics logic involves logical operation of basic-elements, extenics reasoning, expression of proposition and reasoning sentence with basic-element.