

机械与动力工程学院博士生资格考试笔试大纲

Syllabus of Ph.D. Qualification Examination (SJTU-ME)

*笔试主题 Exam Topic	(中文) 机械动力学
	(English) Dynamics of Machinery
*考核形式 Exam Format	闭卷考试, 1 小时 Closed-book exam, 1 hour
*考核目标 Exam Target	<p>认识机械系统的动态特性, 了解动力学基本理论、分析方法; 具备对各类机械系统的动力学进行建模、分析和求解能力。</p> <p>Knowing the dynamic properties of mechanical systems; mastering the dynamics modeling, analysis, and simulation methods of all kinds of mechanical systems.</p>
*考核内容 Exam Contents	<ol style="list-style-type: none"> 1、平面连杆机构的动态静力分析 2、平面连杆机构的平衡设计 3、单自由度机械系统的动力学建模 4、多自由度机械系统的动力学建模 <ol style="list-style-type: none"> 1、Inverse problems of dynamics analysis of planar linkages 2、Equilibrium analysis and design of planar linkages 3、Forward dynamics modeling of 1-DOF mechanical systems 4、Forward dynamics modeling of multi-DOF mechanical systems
*参考书目 References	<p>机械动力学 (第二版), 张策编著, 高等教育出版社, 2008 年</p> <p>Dynamics of Machinery (2nd edition), Ce Zhang, High Education Press</p>
备注 Notes	