# 附件5． 学院（系、所）全英 研究生课程简介(中英文各一份)

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| 课程名称：ELECTRICAL CONTACT, ARCING AND APPLICATION | 课程代码：131.518 |
| 课程类型：□ 博士专修课程  **V** □ 硕士专修课程 |
| 考核方式： 全英文考试  | 教学方式：全英文讲授 |
| 适用专业： 电气工程  | 适用层次：**V**□ 硕士 **V**□ 博士 |
| 开课学期： 秋季  | 总学时：32 | 学分：2 |
| 先修课程要求： |
| 课程组教师姓名 | 职 称 | 专 业 | 年 龄 | 学术方向 |
| 李震彪（负责人） | 教授 | 电器 | 49 | 电器 |
| 何俊佳 | 教授 | 高电压 |  | 高电压 |
| 陈立学 | 博士 | 高电压 |  | 高电压 |
| 臧春燕 | 博士 | 高电压 |  | 高电压 |
| 课程负责教师留学经历及学术专长简介：PROF.LI ZHENBIAO, MAJOR IN ELECTRICAL CONTACT,ARCING AND ITS MATERIAL2000.4--2001.4 VISITING SCHOLAR IN OHIO STATE UNIVERSITY He is the vice chairperson of electrical contact and arcing committee of [China Electrotechnical Society](http://dlib.edu.cnki.net/KNS50/Navi/Bridge.aspx?LinkType=BaseLink&DBCode=cjfd&TableName=cjfdbaseinfo&Field=BaseID&Value=DGJS&NaviLink=%e7%94%b5%e5%b7%a5%e6%8a%80%e6%9c%af%e5%ad%a6%e6%8a%a5)(CES), [executive](http://dict.cn/executive) [member](http://dict.cn/member) of electromechanical product reliability council of CES, vice director of editorial board of Electrical material, member of editorial board of Low voltage apparatus. Prof.Li currently serves as director of Laboratory and Equipment management office of HUST. Prof.Li received around 20 grants from various science foundations, including National Natural Science Foundation of China, Henry Fok Ying-tung Education Foundation, Excellent Younger Faculty Foundation of Education Ministry PRC, Hubei Natural Science Foundation and over 10 grants from industries such as ALSTOM, BOSCH and Long March Rocket company. He has published more than 100 papers in international and domestic academic journals such as IEICE Trans on Electronics, Proceedings of IEEE conference, Proceedings of the CSEE etc. Prof.Li made academic visits to many countries including USA, UK, France, Ireland, Switzerland, Japan and Saudi Arabia etc. |
| 课程教学目标： TO MAKE THE GRADUATE STUDENTS BETTER UNDERSTAND THE ELECTRICAL CONTACT, ARCING AND APPLICATION课程大纲：（章节目录）**CHAPTER 1 ELECTRICAL CONTACT AND ARCING BASIC CONCEPTS**1—1 BISIC CONCEPTS1—2 ARCING MECHANISM AND V—I characteristics1—3 ARC EXTINCTION**Chapter 2 contact resistance** 2—1 mechanism 2—2 influencing factors**Chapter 3 FUSION WELDING OF ELECTRICAL CONTACTS** 3—1 static and dynamic welding mechanism3—2 influencing factors3—3 criterion of static welding tendency3—4 criterion of dynamic welding tendency3—5 relationship between welding and operation cycle based arcing duration**Chapter 4 chopping current in vacuum**4—1 current chopping mechanism4—2 influencing factors4—3 criterion of current chopping ability * 1. chopping current measurement

**chpter 5 current interruption** 5—1 current interruption mechanism5—2 influencing factors* 1. criterion of current interruption ability of contact

**chapter 6 contact erosion**6—1 erosion mechanism6—2 influencing factors* 1. erosion prediction model

**chapter 7 electrical contact materials**7--1 electrical performance requirement7—2 classification of contact materials **chapter 8 electrical stability of switchgear**8—1 electrical stability concept8—2 criterion of electrical stability1. **effect of atmosphere on contact performance**
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| 全英文教材：  |
| 主要参考书：1. **Paul G Slade, Electrical Contacts: Principles and Applications，Marcel Dekker,1999****2、 PROC. OF IEEE HOLM（2000---20012）**3． OTHER RELATED PROC. OF INTERNATIONAL CONFERENCE  |