

Kphqt o cvkqp "Hqt o "hqt" ULVW" I t c f w cvg "Rtqhguukqp" Eqwtugu"

| Dcuke "Kphqt o cvkqp" | | | | |
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| * Course Name | Chinese | | | |
| | English Mechanics of Welding Structure | | | |
| * Credits | 2 | * Teaching Hours | 32 1 =16 | |
| * Semester | Spring | * Cross-semester? | No | Spanning over Semesters |
| * Course Type | Program Elective Course | * Course Type | For full-time students | |
| * Course Category | Specialized Course | Targeting Students | All graduates | |
| * Instruction Language | Chinese | Teaching Method | In class teaching | |
| * Grade | Letter grading | Exam Method | Tests | |
| * School | | | | |
| Subject | | | | |
| Person in charge | Name | ID | School | E-mail |
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| Gzvgp fgf "Kphqt o cvkqp" | | | | |
| * () Course Description | 200 | | | |
| * English Course Description | <p>The mechanics of welding structure plays an important role in modern welding structure design, manufacture and safety evaluation. As an interdisciplinary subject of welding science and mechanics, which opens to master & doctor students of Materials Science and Engineering School. Basing on the early courses such as materials science foundation and materials mechanics, inhomogeneous mechanics characterize of welded joint will be delivered in this course. The related theory and experimental method of fracture, fatigue of welded structure will be introduced, provides basic theoretical knowledge and experimental method in design, assessment and failure analysis for welding structure. The establishment of suitable assessment method for welding structure is the main objective of this course based on the better understanding of the design of welding structure coupling with mechanical behavior. Meanwhile, the course is offered to the postgraduate student, combining with the welding knowledge studied in undergraduate process, the ability to solve practical engineering problems for welding structure in service will be improved. For the cultivating advanced talents of</p> | | | |

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| | welding subject, the mechanics of welding structure is also needed. | | | |
| * () Syllabus | | | | |
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| | * English Syllabus | | | |
| Chapter 1 | | Design principle of welding joint | 2 | Lecture |
| Chapter 2 | | Analysis of welding stress | 4 | Lecture |
| Chapter 3 | | Fracture of welding structure | 4 | Lecture |
| Chapter 4 | | Application of the finite element in welding structure mechanics | 2 | Lecture |
| Chapter 5 | | Fatigue of welding structure | 4 | Lecture |
| Chapter 6 | | Welding stress corrosion cracking | 2 | Lecture |
| Chapter 7 | | Integrity assessment of welding structure | 2 | Lecture |
| Chapter 8 | | Welding fracture test and analysis | 2 | Experiment |
| Chapter 9 | | Welding fatigue test and analysis | 2 | Experiment |
| Chapter 10 | | Welding residual stress measurement | 2 | Experiment |
| Chapter 11 | | Modeling on welding process | 2 | Experiment |
| Chapter 12 | | Course discussion | 4 | Lecture |

