



清华大学

2018

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Mathematical Analysis

x2080283

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Higher Algebra

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Analytic Geometry

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Ordinary Differential Equation

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3	Laplace		Jordan
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2	Laplace		Sylvester	

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Picard		Peano
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1 Matlab

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Probability Theory and Mathematical Statistics

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EXCEL MATLAB

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2017

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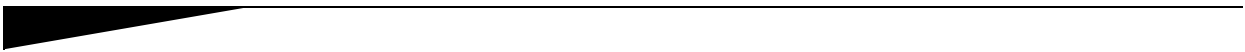
C Programming

x2050011

64

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x2080201

Discrete Mathematics

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Kenneth H.Rosen

2013

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C

Java

x3080311

Real Analysis

x3080311

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Lebesgue

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x3080151

Database Principles and Applications

x3080151

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Complex Analysis

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Liouville

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x3080171

Numerical Analysis

x3080171

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QR
Householder

Hessenberg Given

Householder

Householder QR

			4	2 1
			14	2 1
			8	2 1
			14	2 1
			6	2 1
			6	2 1
			8	2 1
			4	1 1
			12	1 1
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2008.12

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x3080131

Operational Research and Optimization

x3080131

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ppt

LINGO - Excel , 2017 2016 2018 2003 2007

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x4080121

Selective Lectures of Mathematic Analysis

x4080121

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x4080111

Selective Lectures of advanced algebra

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x4080131

Applied Functional Analysis

x4080131

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Banach

Banach

Hahn-Banach

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x4080271

Mathematical Physics Equations

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D'Alembert

Cauchy

D'Alembert

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Dirichlet

1			18	2 1
2			18	2 1
3			12	2 1

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x4080731

Design and Analysis of Algorithms

x4080731

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C++

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C++

2018 8 5

3 Thomas H. Cormen

2012

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x4050071 C++

C++

C++ Programming

x4050071

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3		+	14+6	2 1

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2	2	Person	2	
3	3	Array	2	
4	1	-	2	
5	2	Array SortArray	2	
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OJ

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- 1 C++ () 2017
- 2 C++ 2017
- 3 C++ 2018
- 4 C++ 2018
- 5 OJ IP 59.73.74.161
- 6 C++ 2004 6

7 C++

H.M.Deitel P.J.Deitel

2007 2

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x4050041 JAVA

JAVA

JAVA Programming

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Computer Network

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Software Engineering

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x4080721

Mathematical Modeling

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MATLAB

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Data Analysis

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Machine Learning

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Boosting Bagging

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MOOC

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4		BP	4	

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MOOC

Python C Matlab

2016

2012

Pattern Recognition and Machine Learning Christopher M. Bishop Springer 2006

Tom M. Mitchell 2003

Python [] · [] · 2018

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x4080471

Intelligent Optimization Algorithms

x4080471

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Meteopolis

Meteopolis

Meteopolis

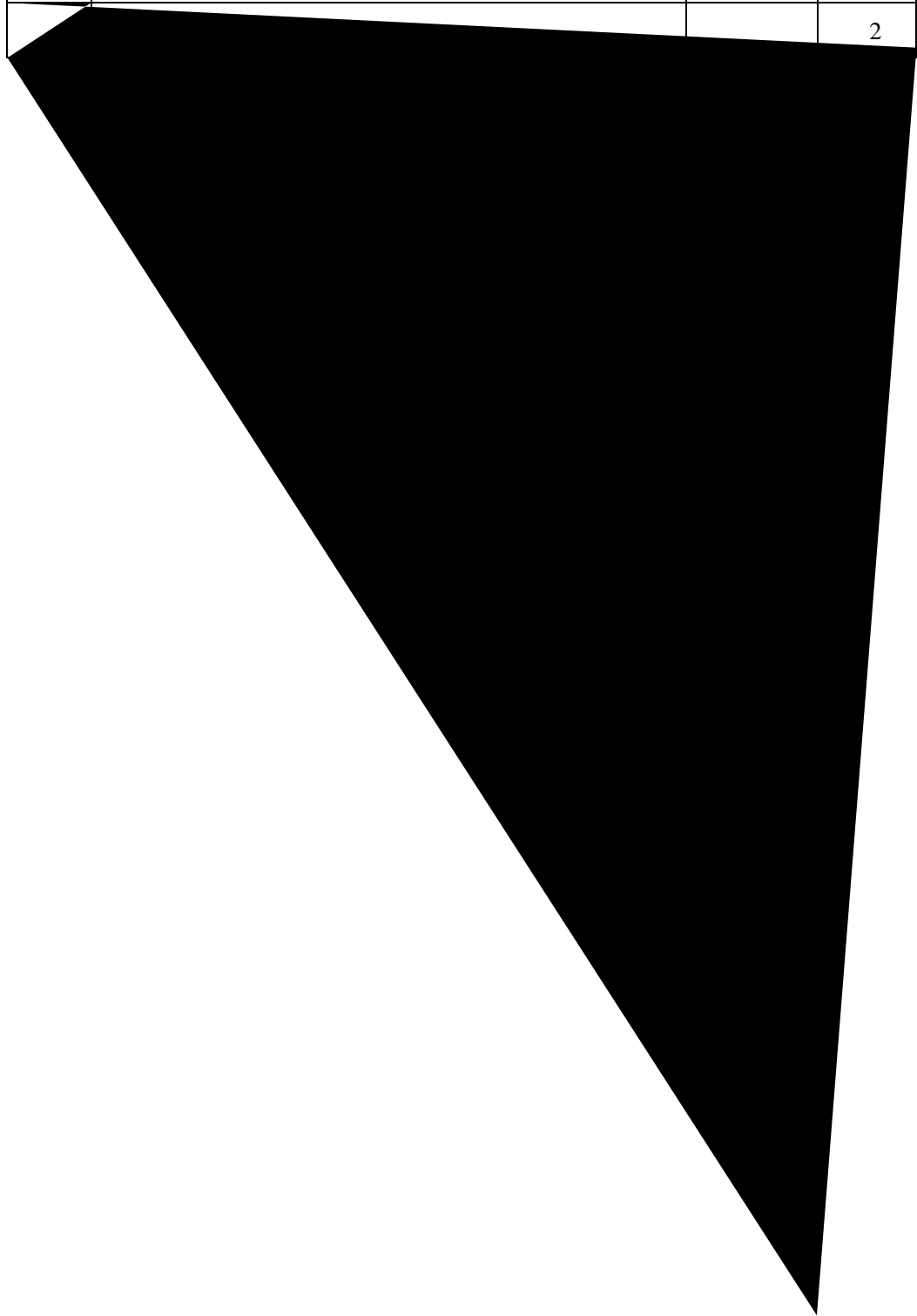
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C MATLAB

MATLAB 30 (2 2015.8

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IEEE T-EC,IEEE T-SMC

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Electrical and Electronic Technology

x4051391

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2009 6 7

2009 6 7

2017 3

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The principle and application of embedded system

x4080711

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ARM

STM32F103

GPIO

ADC

TIMER

WATCHDOG

CAN

ARM

1 STM32F103 GPIO ADC TIMER WATCHDOG CAN	6 7
2	9 Keil 5

ARM STM32

ARM

1. ARM
2. STM32F103

ARM STM32F103

STM32

STM32

LED

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3. LED

STM32

- 1.
- 2.
3. LED

GPIO

GPIO

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2. GPIO
3. GPIO

GPIO

ADC

1. /
2. ADC

ADC

ADC

ADC

TIMER

- 1.
- 2.

WATCHDOG

- 1.
- 2.

- 1.
- 2.
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CAN

CAN

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CAN

CAN

	ARM STM32		4	2 1
		+	6	2 1
		+	6	2 1
	GPIO	+	8	2 1

	ADC	+	8	2 1
	TIMER	+	8	2 1
	WATCHDOG	+	8	2 1
		+	8	2 1
	CAN	+	8	2 1

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STM32
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10		1 STM32F103 GPIO ADC TIMER WATCHDOG CAN
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50		1 STM32F103 GPIO ADC TIMER WATCHDOG CAN

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Fundamentals of Control Theory

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Lyapunov
Lyapunov
Lyapunov

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Lyapunov

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Optimal control

x4080791

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Riccati

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x1120101

Innovative Education

x1120101

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《创新创业专题》教学大纲

x1080013

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《毕业设计（论文）》教学大纲

x2208201

15 /15

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3	9 10

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《常微分方程》实验教学大纲

/ Ordinary Differential Equation

x2080371

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Matlab

Matlab

Matlab

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Matlab	9
Lyapunov Matlab	Matlab

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MATLAB

2006.

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《概率论与数理统计》实验教学大纲

/ Probability and Mathematical Statistics

x2080421

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Excel

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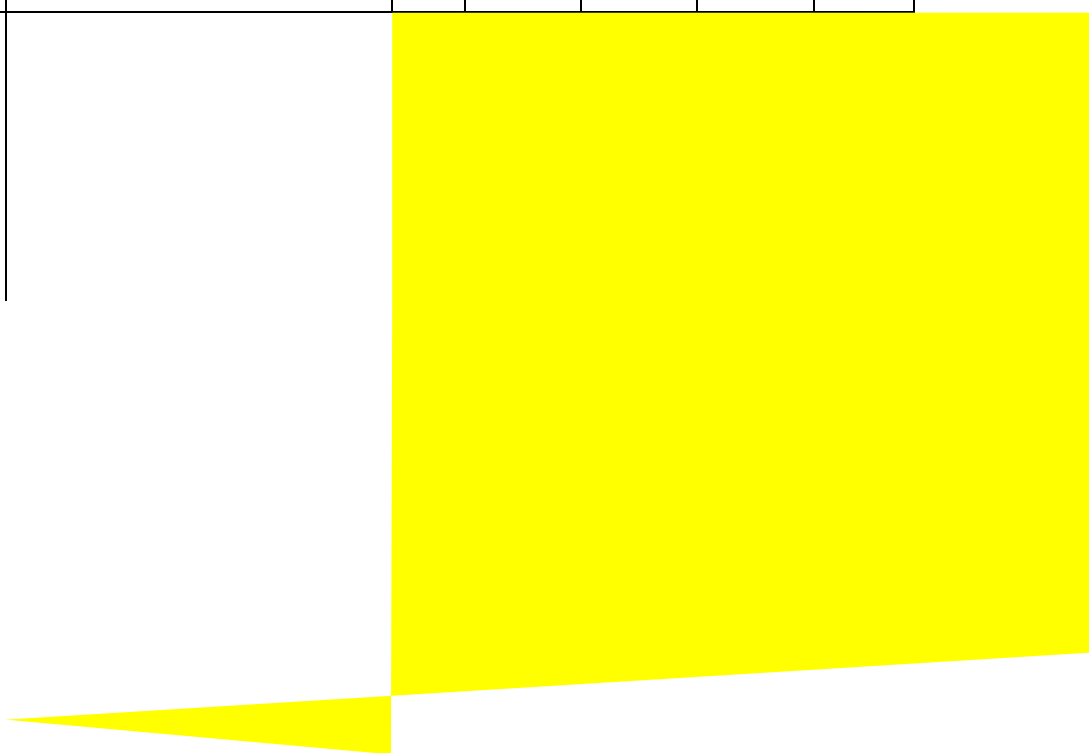
《C 语言程序设计》实验教学大纲

C / C Programming
x2050011

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《数据结构与算法》实验教学大纲

课程名称 (中文/英文): /Data structures and Algorithms

课程代码: x3080241

课程类型:

课程性质:

设置类别:

适用专业:

课程总学时: 64

课程总学分: 4.0

实验学时: 16

实验学分: 0

开实验学期:

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2	VC++
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2012
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《数据库原理与应用》实验教学大纲

课程名称（中文/英文）： / Database Principles and Applications
课程代码： x3080151 课程类型：
课程性质： 设置类别：
适用专业：
课程总学时： 64 课程总学分： 4.0
实验学时： 16 实验学分： 0
开实验学期：

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《数值分析》实验教学大纲

/ Numerical Analysis

x3080171

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1			12				
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5 2008.12

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MATLAB6.0 2001.9

C 1991.7

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《运筹与优化》实验教学大纲

/ Operational Research and Optimization

x3080131

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Excel Lingo Matlab

Excel Lingo Matlab

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3		Matlab	6				
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MATLAB&Excel

2013.

《算法设计与分析》实验教学大纲

/ Design and Analysis of Algorithms

x4080731

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C++

		<p>C++</p> <p>2.</p> <p>3.</p>					
2	0-1	<p>1. C++</p> <p style="text-align: right;">C++ 0-1</p> <p>2.</p> <p>3.</p> <p style="text-align: center;">0-1</p>	8				
3		<p>1. C++</p> <p>2. Dijkstra</p> <p>3.</p>	6				

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C++

《C++程序设计》实验教学大纲

C++ / C++ Programming

x4050071

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C++

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C++

C++

C++

C++

1. OJ IP 59.73.74.161
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C++	9

1	1		2				
2	2	Person	2				
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		C++

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2017

2. C++

2017

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2018

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2018

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IP 59.73.74.161

《JAVA 程序设计》实验教学大纲

JAVA / JAVA Programming

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48 3.0
16 0

JAVA

JAVA
JAVA

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JAVA JAVA JAVA	9

JAVA	JAVA JAVA	2					
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《计算机网络》实验教学大纲

课程名称 (中文/英文): / Computer Networks
课程代码: x4080741 课程类型:
课程性质: 设置类别:
适用专业:
课程总学时: 48 课程总学分: 3.0
实验学时: 16 实验学分: 0
开实验学期:

Cisco Packet Tracer

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	Cisco Packet Tracer
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《软件工程》实验教学大纲

课程名称（中文/英文）： / Software Engineering

课程代码： x4080751

课程类型：

课程性质：

设置类别：

适用专业：

1		PPT	4				
2		1. PPT 2. 3. 4.	4				
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PPT

PPT

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(6)
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2013

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《数学模型》实验教学大纲

/Mathematical Modeling

x4080721

48

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MATLAB

MATLAB

- 1
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MATLAB

1 MATLAB	9
2	10

1	MATLAB	MATLAB	2				
2	MATLAB	MATLAB	4				

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《数据分析》实验教学大纲

/ Data Analysis

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2 R	9 10

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2			8				
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1. . R : ,2011
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4. . R : 2008.
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《机器学习》实验教学大纲

/ Machine Learning

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Python Matlab C

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K-Means DBSCAN PCA	9
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《智能优化算法》实验教学大纲

intelligent optimization algorithms

x4080471

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MATLAB 30 (2 2015.8

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IEEE T-EC,IEEE T-SMC

《电工电子技术》实验教学大纲

/

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2007	6
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《嵌入式原理与应用》实验教学大纲

/The principle and application of embedded system

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64 4.0
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1 STM32F103 GPIO ADC TIMER WATCHDOG CAN	6 7
2	9 Keil 5

1		LED	8				

2		GPIO ADC TIMER WATCHDOG	16				
3		CAN	8				

	100-90	89-80	79-70	70-60	60-

STM32

2016

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《控制理论基础》实验教学大纲

/ Fundamentals of Control Theory

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Matlab

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PPT

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《最优控制》实验教学大纲

/optimal control

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