Course schedule: Modeling Process Dynamics

January 6, 2020

Contents

1	thha it m	at the days of class and associated topics topics at we will cover on those days. If there is no topic on a day light happen that the exam preparation is listed. I might ate this only a few days in advance.	3
2	Clas	s schedule	3
	2.1	$<\!\!2020\text{-}01\text{-}07\ Tue\ 09\text{:}30\!\!>$ Introduction ./lectures/00-intro.org	3
	2.2	$<\!\!2020\text{-}01\text{-}09$ Thu $09\text{:}30\!\!>$ Python/Jupyter ./lectures/01-jupyter	
		org	3
	2.3	$<\!\!2020\text{-}01\text{-}14$ Tue 09:30> Mathematical modelling ./lectures/	
		01-modelling.org	3
	2.4	$<\!\!2020\text{-}01\text{-}16\ Thu\ 09\text{:}30\!\!>$ First principle modelling ./lectures/	
		02-modelling.org	3
	2.5	<2020-01-21 Tue $09:30>$ Integration of models given by first	
		order ordinary differential equations and numerical integration	
	2.0	./lectures/03-fode-1.org	3
	2.6	<2020-01-23 Thu 09:30> Systems of first-order differential equa-	0
	0.7	tions ./lectures/04-fode-2.org	3
	2.7	<2020-01-28 Tue 09:30> Linear systems ./lectures/05-Lin-1.	9
	2.8	org	3
	2.0	./lectures/06-Lin-2.org	3
	2.9	<pre></pre> <pre><2020-02-04 Tue 09:30> Preparation Exam</pre>	3
	-	<2020-02-04 Tue 09:30> Freparation Exam :	3
		<2020-02-11 Tue $09:30>$ Continuous and discrete models and	U
	2.11	representation ./lectures/07-Cont-Discr-1.org	3
	2 12	<2020-02-13 Thu $09:30>$ Time delay systems ./lectures/07-Cont-	
	2.12	org	3
	2.13	<2020-02-18 Tue 09:30> Reading Week	3
		<2020-02-20 Thu 09:30> Reading week	3
		<pre><2020-02-25 Tue 09:30> Transfer function models ./lectures/</pre>	
		08-Transfer-function-01.org	3

2.16	<2020-02-27 Thu 09:30> Transfer function link to State Space	
	./lectures/08-Transfer_function-02.org	3
2.17	<2020-03-03 Tue $09:30>$ Mathematical model propertiese, con-	
	trollability and observability ./lectures/09-Linear-System-prope	rties.
	org	3
2.18	<2020-03-05 Thu $09:30>$ Discrete based models ./lectures/	
	10-discrete-Linear-System-setting.org	3
2.19	<2020-03-10 Tue $09:30>$ Discrete model response and properties	
	./lectures/11-discrete-system-setting-response.org	3
2.20	<2020-03-12 Thu 09:30> Preparation II	3
2.21	<2020-03-17 Tue 09:30> Exam II	3
2.22	$<\!2020\text{-}03\text{-}19\ Thu\ 09\text{:}30\!>\ \text{Linear regression}\ \text{I}$./lectures/12-linear	r-regression
	org	3
2.23	<2020-03-24 Tue $09:30>$ Least square estimation ./lectures/	
	13-least-square-estimation.org	3
2.24	<2020-03-26 Thu $09:30>$ System identification ./lectures/	
	14-system-identification.org	3
2.25	<2020-03-31 Tue 09:30> Principal Component Analysis ./lectures	/
	15-PCA.org	3
2.26	$<\!2020\text{-}04\text{-}02$ Thu 09:30> Final Exam Preparation	3