

Course Syllabus

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Disclaimer: This is only a tentative plan and it will be revised continuously.

Literature: M. Sipser, Introduction to the Theory of Computation, 3rd edition. (There is no much difference between the 3rd and the previous editions, so if you have an older version of the book, it will work fine.)

Plan

Tue Jan 31, 2017 Overview of the course

Thu Feb 2, 2017 Regular Languages (Ch.1)

Tue Feb 7, 2017 Regular Languages, nondeterminism (Ch.1)

Thu Feb 9, 2017 Regular Languages. Pumping Lemma (Ch.2)

Tue Feb 14, 2017 Church-Turing Thesis. Turing Machines (Ch.3)

Thu Feb 16, 2017 Variants of TMs, definition of algorithm

Tue Feb 21, 2017 Algorithms Winter School, no lecture

Thu Feb 23, 2017 No lecture

Tue Feb 28, 2017 Decidability. Halting Problem (Intro and 4.2)

Thu Mar 2, 2017 Reducibility. Mapping reducibility (5.3)

Tue Mar 7, 2017 No lecture. 1st assignment

Thu Mar 9, 2017 No lecture. 1st assignment

Tue Mar 14, 2017 Turing Reducibility (6.3)

Thu Mar 16, 2017 Time Complexity

Tue Mar 21, 2017 Time Complexity

Thu Mar 23, 2017 Time Complexity

Tue Mar 28, 2017 Time Complexity

Thu Mar 30, 2017 No lecture. 2nd assignment

Tue Apr 4, 2017 No lecture. 2nd assignment

Thu Apr 6, 2017 Space Complexity

Tue Apr 11, 2017 Easter break

Thu Apr 13, 2017 Easter break

Tue Apr 18, 2017 Space Complexity. Savitch Theorem

Thu Apr 20, 2017 Space Complexity. PSPACE-complete problems TQBF.

Tue Apr 25, 2017 Space Complexity. PSPACE-complete problems General Geography

Thu Apr 27, 2017 Space Complexity. Log-space complexity (excluding the proof of $NL=coNL$)

Course Summary:

Date	Details	
Tue Jan 17, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511550&include_contexts=course_4475)	10:15am to 12pm
Thu Jan 19, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511551&include_contexts=course_4475)	12:15pm to 2pm
Tue Jan 24, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511552&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511553&include_contexts=course_4475)	12:15pm to 2pm
Thu Jan 26, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511554&include_contexts=course_4475)	12:15pm to 2pm
Tue Jan 31, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511555&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511556&include_contexts=course_4475)	12:15pm to 2pm
Thu Feb 2, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511557&include_contexts=course_4475)	12:15pm to 2pm

[event_id=511557&include_contexts=course_4475\)](#)

Tue Feb 7, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger https://mitt.uib.no/calendar?event_id=511558&include_contexts=course_4475	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe https://mitt.uib.no/calendar?event_id=511559&include_contexts=course_4475	12:15pm to 2pm
Thu Feb 9, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger https://mitt.uib.no/calendar?event_id=511560&include_contexts=course_4475	12:15pm to 2pm
Tue Feb 14, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger https://mitt.uib.no/calendar?event_id=511561&include_contexts=course_4475	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe https://mitt.uib.no/calendar?event_id=511562&include_contexts=course_4475	12:15pm to 2pm
Thu Feb 16, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger https://mitt.uib.no/calendar?event_id=511563&include_contexts=course_4475	12:15pm to 2pm
Tue Feb 21, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger https://mitt.uib.no/calendar?event_id=511564&include_contexts=course_4475	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe https://mitt.uib.no/calendar?event_id=511565&include_contexts=course_4475	12:15pm to 2pm
Thu Feb 23, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger https://mitt.uib.no/calendar?event_id=511566&include_contexts=course_4475	12:15pm to 2pm
Tue Feb 28, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger https://mitt.uib.no/calendar?event_id=511567&include_contexts=course_4475	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe https://mitt.uib.no/calendar?event_id=511568&include_contexts=course_4475	12:15pm to 2pm
Thu Mar 2, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger https://mitt.uib.no/calendar?event_id=511569&include_contexts=course_4475	12:15pm to 2pm
	 [INF235] Forelesning Undervisning i INF235 / Forelesninger	

Tue Mar 7, 2017	https://mitt.uib.no/calendar?event_id=511570&include_contexts=course_4475	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511571&include_contexts=course_4475)	12:15pm to 2pm
Tue Mar 14, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511572&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511573&include_contexts=course_4475)	12:15pm to 2pm
Thu Mar 16, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511574&include_contexts=course_4475)	12:15pm to 2pm
Tue Mar 21, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511575&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511576&include_contexts=course_4475)	12:15pm to 2pm
Thu Mar 23, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511577&include_contexts=course_4475)	12:15pm to 2pm
Tue Mar 28, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511578&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511579&include_contexts=course_4475)	12:15pm to 2pm
Thu Mar 30, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511580&include_contexts=course_4475)	12:15pm to 2pm
Tue Apr 4, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511581&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511582&include_contexts=course_4475)	12:15pm to 2pm

Thu Apr 6, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511583&include_contexts=course_4475)	12:15pm to 2pm
Tue Apr 18, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511584&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511585&include_contexts=course_4475)	12:15pm to 2pm
Thu Apr 20, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511586&include_contexts=course_4475)	12:15pm to 2pm
Tue Apr 25, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511587&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511588&include_contexts=course_4475)	12:15pm to 2pm
Thu Apr 27, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511589&include_contexts=course_4475)	12:15pm to 2pm
Tue May 2, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511590&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511591&include_contexts=course_4475)	12:15pm to 2pm
Thu May 4, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511592&include_contexts=course_4475)	12:15pm to 2pm
Tue May 9, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511593&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar?event_id=511594&include_contexts=course_4475)	12:15pm to 2pm
Thu May 11, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar?event_id=511595&include_contexts=course_4475)	12:15pm to 2pm

Tue May 16, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar? event_id=511596&include_contexts=course_4475)	10:15am to 12pm
	 [INF235] Gruppe Undervisning i INF235 / Gruppe (https://mitt.uib.no/calendar? event_id=511597&include_contexts=course_4475)	12:15pm to 2pm
Thu May 18, 2017	 [INF235] Forelesning Undervisning i INF235 / Forelesninger (https://mitt.uib.no/calendar? event_id=511598&include_contexts=course_4475)	12:15pm to 2pm