| Control   Thursday, September 1, 2022   Control   Thursday, September 1, 2022   Thursday, September 8, 2022   Equivalence of DTAs and of PAs   Chapter 9.  | Week       |                              | Content   | Reading          | HW       | HW      |
|--|------------|------------------------------|---|------------------|----------|---------|
| Tuesday, September 12, 2022  Tuesday, September 13, 2022  Tuesday, September 20, 2022  Tuesday, Septemb |            | Thursday Santombor 1 2022    | Course policies, introduction to Th. Of Comp.                                   |                  | Assigned | Due     |
| Tuesday, September 22, 2022  Tuesday, September 13, 2022  Tuesday, September 22, 2022  Tuesday, September 23, 2022  Tuesday, September 24, 2022  Tuesday, September 25, 2022  Tuesday, September 26, 2022  Tuesday, September 26, 2022  Tuesday, September 27, 2022  Tuesday, September 28, 2022  Tuesday, September 28, 2022  Tuesday, October 4, 2022  Tuesday, October 4, 2022  Tuesday, October 4, 2022  Tuesday, October 11, 2022  Tuesday, October 13, 2022  Tuesday, October 14, 2022  Tuesday, October 13, 2022  Tuesday, October 14, 2022  Tuesday, October 13, 2022  Tuesday, October 14, 2022  Tuesday, October 14, 2022  Tuesday, October 17, 2022  Tuesday, October 17, 2022  Tuesday, October 17, 2022  Tuesday, November 18, 2022  Tuesday, November 28, 2022  | week 2     |                              | Terminology and formal defnition of FSAs state diagrams, regular languages (RL) |                  |          |         |
| Tursday, September 13, 2022 Regular Expressions and Pair relation to NFAs and NFAs  Tursday, September 15, 2022 Regular Expressions and Pair relation to NFAs and DFAs  Tursday, September 20, 2022 FSA minimization Chapter 1.3  Tursday, September 22, 2022 DFA RE.  Tursday, September 22, 2022 The Pumping Lemma for RLs. Non-regular languages Chapter 1.4  Tursday, September 27, 2022 The Pumping Lemma for RLs. Non-regular languages PASS District 1.4  Tursday, September 29, 2022 The Pumping Lemma for GFLs. Chapter 2.1  Tursday, October 4, 2022 The Pumping Lemma for GFLs. Chapter 2.3  Tursday, October 4, 2022 The Pumping Lemma for GFLs. Chapter 2.3  Tursday, October 4, 2022 The Pumping Lemma for GFLs. Chapter 2.3  Tursday, October 4, 2022 The Pumping Lemma for GFLs. Chapter 2.3  Tursday, October 4, 2022 The Pumping Lemma for GFLs. Chapter 2.3  Tursday, October 13, 2022 Monday schedule —no class  Tursday, October 13, 2022 Deterministic Pushdown Automata Chapter 2.2  Tursday, October 13, 2022 Turing Machines Chapter 3.1, 32  Tursday, October 20, 2022 Turing Machines Chapter 3.1, 32  Tursday, October 27, 2022 Working with Turing Machines Chapter 3.1, 32  Tursday, November 3, 2022 Urdecidability Chapter 4.2  Tursday, November 5, 2022 The Recursion Theorem Chapter 4.1  Tursday, November 6, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 12, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 12, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 29, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 29, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 29, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 29, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 29, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 29, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 29, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 29, 2022 The Recursion Theorem Chapter 6.1  Tursday, November 29, 2022 The Recursion Theorem Chapter 7.3  Tursday, November 29, 2022 |            | Thursday, September 8, 2022  | Closure of RLs under operations of union and concatenation,                     | Chapter 1.2      |          |         |
| Toursday, September 15, 2022   Regular Expressions and their relation to   P32 Out   P33 Out     |            | Tuesday, September 13, 2022  | Equivalence of DFAs and NFAs  | Chapter 1.2      | 70.000   |         |
| Tuesday, September 22, 2022   The Pumping Lemma for RLs, Non-regular languages   Chapter 1.3   Sat. 1001   P83 Out   P84 Out   | week 3     | Thursday, September 15, 2022 |   | Chapter 1.3      |          | 11:59pm |
| Thursday, September 22, 2022   The Pumping Lemma for RLs, Non-regular languages   Chapter 1.4  |            | Tuesday, September 20, 2022  | FSA minimization  | Chapter 1.3      |          |         |
| Thursday, September 29, 2022  Context Fire Languages Parse Trees  Tree Stanguages Tuesday, October 4, 2022  The Pumping Lemma for CFLs, Chonesty, normal from Thursday, October 6, 2022  Examples of non-CFG languages  Thursday, October 11, 2022  Monday schedule – no class  Thursday, October 13, 2022  Deterministic Pushdown Automata  Chapter 2.3  Sat. 1008  Fri. 1007  Fri. 1 | week 4     | Thursday, September 22, 2022 | DFA 🖬 RE,   | Chapter 1.3      |          | 11:59pm |
| Thursday, September 29, 2022   |            | Tuesday, September 27, 2022  | The Pumping Lemma for RLs, Non-regular languages                                | Chapter 1.4      |          |         |
| Tuesday, October 6, 2022   Examples of non-CFG languages   Chapter 2.3   Sat. 1008   Fri. 1007   11:59pm   PSS Out   | week 5     | Thursday, September 29, 2022 |   | Chapter 2.1      |          | 11:59pm |
| Thursday, October 6, 2022  |            | Tuesday, October 4, 2022     |   | Chapter 2.3      |          |         |
| Tuesday, October 11, 2022   Monday schedule - no class   Fit. 10/07   11:59 pp.  | week 6     | Thursday, October 6, 2022    | Examples of non-CFG languages   | Chapter 2.3      |          | 11:59pm |
| Thursday, October 13, 2022 Deterministic Pushdown Automata Chapter 2.2 11:59pm/P5 Due  Tuesday, October 18, 2022 Review  Thursday, October 20, 2022 MIDTERM EXAM  Tuesday, October 25, 2022 Turing Machines Chapter 3.1 Sat 10/29  Thursday, October 27, 2022 Working with Turing Machines Chapter 3.1, 3.2 P86 Out  Tuesday, November 1, 2022 Variants of Turing Machines Chapter 3.2, 3.3 Chapter 3.2, 3.3 Chapter 3.2, 3.3 Chapter 3.2, 3.3 Chapter 4.1 Sat 11/05  Thursday, November 3, 2022 Decidable Languages, Enumerators Chapter 4.1 P87 Out  Tuesday, November 8, 2022 Undecidability Chapter 4.2 Sat 11/12 Fri. 11/14 11:59pm/P6 Due  Tuesday, November 10, 2022 Reductions Chapter 5.1, 5.3 Sat 11/12 Fri. 11/11 11:39pm/P7 Due  Tuesday, November 15, 2022 The Recursion Theorem Chapter 6.1 Tuesday, November 17, 2022 Polynomial Complexity  Tuesday, November 22, 2022 Polynomial Complexity  Tuesday, November 24, 2022 Polynomial Complexity Chapter 7.1, 7.2 Sat 11/19 Tinsgam/P8 Due  Tuesday, November 24, 2022 Polynomial Complexity Chapter 7.3 Sat 12/03 Fri. 12/02 Thursday, December 1, 2022 Class NP Chapter 7.3 Sat 12/03 Fri. 12/02 Thursday, December 1, 2022 Examples of NP-complete problems Chapter 7.5 Sat 12/03 Fri. 12/09 Thursday, December 6, 2022 Examples of NP-complete problems Chapter 7.5 Fri. 12/09 Thursday, December 8, 2022 If time permits: beyond NP Chapter 7.5 Fri. 12/09 Thursday, December 8, 2022 Review  |            | Tuesday, October 11, 2022    | Monday schedule – no class  |                  |          |         |
| Thursday, October 20, 2022   MIDTERM EXAM   Tuesday, October 27, 2022   Turing Machines   Chapter 3.1  | week 7     | Thursday, October 13, 2022   | Deterministic Pushdown Automata   | Chapter 2.2      |          | 11:59pm |
| Thursday, October 20, 2022  Tuesday, October 27, 2022  Tuesday, November 1, 2022  Tuesday, November 10, 2022  Thursday, November 10, 2022  Thursday, November 10, 2022  Thursday, November 10, 2022  Tuesday, November 11, 2022  Tuesday, November 12, 2022  The Recursion Theorem  Chapter 6.1  Thursday, November 22, 2022  Thursday, November 24, 2022  Thursday, November 24, 2022  Thursday, November 24, 2022  Thursday, November 25, 2022  Thursday, November 26, 2022  Thursday, November 27, 2022  Thursday, November 28, 2022  Thursday, November 29, 20 | week 8     | Tuesday, October 18, 2022    | Review  |                  |          |         |
| Thursday, November 1, 2022 Working with Turing Machines Chapter 3.1, 3.2 PS6 Out  Tuesday, November 1, 2022 Variants of Turing Machines Church-Turing Thesis Chapter 3.2, 3.3 Sat. 11/05  Thursday, November 3, 2022 Decidable Languages, Enumerators Chapter 4.1 Sat. 11/06  Thursday, November 8, 2022 Undecidability Chapter 4.2  Tuesday, November 10, 2022 Reductions Chapter 5.1, 5.3 Sat. 11/12  Thursday, November 10, 2022 The Recursion Theorem Chapter 6.1  Tuesday, November 15, 2022 The Recursion Theorem Chapter 6.1  Thursday, November 17, 2022 Applications of Recursion Theorem Introduction to Complexity  Tuesday, November 22, 2022 Polynomial Complexity/class P Chapter 7.1, 7.2  Tuesday, November 24, 2022 Thanksgiving!  Tuesday, November 29, 2022 Class NP Chapter 7.3  Thursday, November 29, 2022 Examples of NP-complete problems Chapter 7.4, 7.5  Thursday, December 6, 2022 Examples of NP-complete problems  Tuesday, December 8, 2022 Review  |            | Thursday, October 20, 2022   | MIDTERM EXAM  |                  |          |         |
| Thursday, October 27, 2022 Working with Turing Machines Chapter 3.1, 3.2  Tuesday, November 1, 2022 Variants of Turing Machines Church-Turing Thesis Chapter 3.2, 3.3  Tuesday, November 3, 2022 Decidable Languages, Enumerators Chapter 4.1  Thursday, November 8, 2022 Undecidability Chapter 4.2  Tuesday, November 10, 2022 Reductions Chapter 5.1, 5.3  Tuesday, November 15, 2022 The Recursion Theorem Chapter 6.1  Tuesday, November 17, 2022 The Recursion Theorem Chapter 6.1  Tuesday, November 17, 2022 The Recursion Theorem Chapter 6.1, 7.1  Thursday, November 17, 2022 Thursday, November 17, 2022 Thursday, November 17, 2022 Thursday, November 17, 2022 Thursday, November 22, 2022 Polynomial Complexity Chapter 6.1, 7.1  Tuesday, November 24, 2022 Thanksgivingl  Tuesday, November 24, 2022 Thanksgivingl  Tuesday, November 29, 2022 Class NP Chapter 7.3  Thursday, December 1, 2022 Examples of NP-completeness Chapter 7.5  Thursday, December 6, 2022 Examples of NP-complete problems Chapter 7.5  Thursday, December 8, 2022 Review   |            | Tuesday, October 25, 2022    | Turing Machines   | Chapter 3.1      |          |         |
| Thursday, November 3, 2022   Decidable Languages, Enumerators   Chapter 4.1   Sat. 11/05   Fri. 11/04   11:39pm   P87 Out   P6 Due   | week 9     | Thursday, October 27, 2022   | Working with Turing Machines  | Chapter 3.1, 3.2 |          |         |
| Thursday, November 3, 2022  Tuesday, November 8, 2022  Undecidability  Chapter 4.1  Thursday, November 10, 2022  Reductions  Chapter 5.1, 5.3  Chapter 5.1, 5.3  Sat. 11/12  Thursday, November 10, 2022  Reductions  Chapter 6.1  Tuesday, November 10, 2022  The Recursion Theorem  Chapter 6.1  Thursday, November 17, 2022  Thursday, November 17, 2022  Applications of Recursion Theorem Introduction to Complexity  Tuesday, November 22, 2022  Polynomial Complexity/class P  Thursday, November 24, 2022  Thanksgiving!  Tuesday, November 29, 2022  Class NP  Chapter 7.1, 7.2  Thursday, November 29, 2022  Thanksgiving!  Tuesday, November 29, 2022  Class NP  Chapter 7.3  Sat. 12/03  Fri. 12/02  11:59pm  PS9 Out  PS Due  Tuesday, November 29, 2022  Class NP  Chapter 7.4, 7.5  Chapter 7.4, 7.5  Thursday, December 6, 2022  Examples of NP-complete problems  Chapter 7.5  Thursday, December 8, 2022  Thursday, December 8, 2022  Review  Review   |            | Tuesday, November 1, 2022    |   | Chapter 3.2, 3.3 |          |         |
| Thursday, November 10, 2022  Reductions  Chapter 5.1, 5.3  Chapter 5.1, 5.3  PS8 Out  P7 Due  Tuesday, November 15, 2022  The Recursion Theorem  Chapter 6.1  Thursday, November 17, 2022  Applications of Recursion Theorem Introduction to Complexity  Thursday, November 22, 2022  Polynomial Complexity/class P  Chapter 7.1, 7.2  Thursday, November 24, 2022  Thanksgiving!  Tuesday, November 29, 2022  Class NP  Chapter 7.3  Chapter 7.3  Chapter 7.3  Fri. 12/02  Thursday, December 1, 2022  Thursday, December 6, 2022  Examples of NP-complete problems  Chapter 7.4, 7.5  PS10 Out  P9 Due  Tuesday, December 8, 2022  If time permits: beyond NP  Chapter 8.1, 8.2  Fri. 12/09  11:59pm  P10 Due  Tuesday, December 13, 2022  Review  |            | Thursday, November 3, 2022   | Decidable Languages, Enumerators  | Chapter 4.1      |          | 11:59pm |
| Thursday, November 10, 2022  Reductions  Chapter 5.1, 5.3  PS8 Out  P7 Due  Tuesday, November 15, 2022  The Recursion Theorem Chapter 6.1  Thursday, November 17, 2022  Applications of Recursion Theorem Introduction to Complexity  Tuesday, November 22, 2022  Polynomial Complexity/class P Chapter 7.1, 7.2  Thursday, November 24, 2022  Thanksgiving!  Tuesday, November 29, 2022  Class NP Chapter 7.3  Chapter 7.3  Chapter 7.3  Fri. 11/12  Fri. 11/11  Tri.59pm PS9 Out P8 Due  Chapter 7.1, 7.2  Thursday, November 29, 2022  Class NP Chapter 7.3  Chapter 7.3  Chapter 7.4, 7.5  PS10 Out P9 Due  Tuesday, December 6, 2022  Examples of NP-complete problems Chapter 7.5  Thursday, December 8, 2022  If time permits: beyond NP Chapter 8.1, 8.2  Fri. 12/09 11:59pm P10 Due  Tuesday, December 13, 2022  Review   | week<br>11 | Tuesday, November 8, 2022    | Undecidability  | Chapter 4.2      |          |         |
| Thursday, November 17, 2022  Applications of Recursion Theorem Introduction to Complexity  Tuesday, November 22, 2022  Polynomial Complexity/class P  Chapter 7.1, 7.2  Thursday, November 24, 2022  Thanksgiving!  Tuesday, November 29, 2022  Class NP  Chapter 7.3  Thursday, December 1, 2022  NP-completeness  Chapter 7.4, 7.5  PS10 Out  P9 Due  Tuesday, December 6, 2022  Examples of NP-complete problems  Chapter 7.5  Thursday, December 8, 2022  If time permits: beyond NP  Chapter 8.1, 8.2  Fri. 12/09  11:59pm  P10 Due  Tuesday, December 13, 2022  Review   |            | Thursday, November 10, 2022  | Reductions  | Chapter 5.1, 5.3 |          | 11:59pm |
| Tuesday, November 22, 2022 Polynomial Complexity Chapter 6.1, 7.1  Tuesday, November 22, 2022 Polynomial Complexity/class P Chapter 7.1, 7.2  Thursday, November 24, 2022 Thanksgiving!  Tuesday, November 29, 2022 Class NP Chapter 7.3  Thursday, December 1, 2022 NP-completeness Chapter 7.4, 7.5  Tuesday, December 6, 2022 Examples of NP-complete problems Chapter 7.5  Thursday, December 8, 2022 If time permits: beyond NP Chapter 8.1, 8.2  Tuesday, December 13, 2022 Review   | week<br>12 | Tuesday, November 15, 2022   | The Recursion Theorem   | Chapter 6.1      |          |         |
| Thursday, November 24, 2022  Thanksgiving!  Tuesday, November 29, 2022  Class NP  Chapter 7.3  Thursday, December 1, 2022  NP-completeness  Chapter 7.4, 7.5  PS10 Out  P9 Due  Tuesday, December 6, 2022  Examples of NP-complete problems  Chapter 7.5  Thursday, December 8, 2022  If time permits: beyond NP  Chapter 8.1, 8.2  Fri. 12/09  11:59pm  P9 Due  Tuesday, December 8, 2022  Review   |            | Thursday, November 17, 2022  |   | Chapter 6.1, 7.1 |          | 11:59pm |
| Thursday, November 24, 2022  Thanksgiving!  Tuesday, November 29, 2022  Class NP  Chapter 7.3  Sat. 12/03  Fri. 12/02  11:59pm  P9 Due  Tuesday, December 6, 2022  Examples of NP-complete problems  Chapter 7.5  Thursday, December 8, 2022  If time permits: beyond NP  Chapter 8.1, 8.2  Fri. 12/09  11:59pm  P9 Due  Tuesday, December 8, 2022  Review   | week<br>13 | Tuesday, November 22, 2022   | Polynomial Complexity/class P   | Chapter 7.1, 7.2 |          |         |
| week 14         Thursday, December 1, 2022         NP-completeness         Chapter 7.4, 7.5         Sat. 12/03         Fri. 12/02         11:59pm         PS 10 Out         P9 Due           week 15         Tuesday, December 6, 2022         Examples of NP-complete problems         Chapter 7.5         Fri. 12/09         Fri. 12/09         11:59pm         P10 Due  |            | Thursday, November 24, 2022  | Thanksgiving!   |                  |          |         |
| 14 Thursday, December 1, 2022 NP-completeness Chapter 7.4, 7.5 Sat. 12/03 Fri. 12/02 11:59pm  Tuesday, December 6, 2022 Examples of NP-complete problems Chapter 7.5  Thursday, December 8, 2022 If time permits: beyond NP Chapter 8.1, 8.2  Tuesday, December 13, 2022 Review  | week .     | Tuesday, November 29, 2022   | Class NP  | Chapter 7.3      |          |         |
| week 15 Thursday, December 8, 2022 If time permits: beyond NP Chapter 8.1, 8.2  Tuesday, December 13, 2022 Review  | 14         | Thursday, December 1, 2022   | NP-completeness   | Chapter 7.4, 7.5 |          | 11:59pm |
| Thursday, December 8, 2022 If time permits: beyond NP Chapter 8.1, 8.2  Tuesday, December 13, 2022 Review  | week       | Tuesday, December 6, 2022    | Examples of NP-complete problems  | Chapter 7.5      |          |         |
|  | 15         | Thursday, December 8, 2022   | If time permits: beyond NP  | Chapter 8.1, 8.2 |          | 11:59pm |
| TBA FINAL EXAM   |            | Tuesday, December 13, 2022   | Review  |                  |          |         |
|  |            | ТВА                          | FINAL EXAM  |                  |          |         |