

Individual study plan

Name:

Partner **Charles University**

Year: **2023/24**

Programme: **CS - Language Technologies and Computational Linguistics**

| code | course | ECTS | term | LCT tracks (as guidelines) | | | | note |
|---------------------------|--|------|------|----------------------------|-----|-----|-----|--|
| | | | | core | DLR | NLA | LDS | |
| Obligatory courses | | | | | | | | |
| NTIN066 | Data Structures I | 6 | s | | | | 6 | must be passed in Prague |
| NTIN090 | Introduction to Complexity and Computability | 4 | w | | | | 4 | must be passed in Prague |
| NPFL063 | Introduction to General Linguistics | 4 | w | 4 | | | | recognition must be officialy approved |
| NPFL067 | Statistical Methods in Natural Language Processing I | 5 | w | 2 | | 3 | | recognition must be officialy approved |
| NPFL138 | Deep learning | 8 | s | 3 | | | 5 | recognition must be officialy approved |
| | Diploma Thesis I | 6 | both | | | | | |
| | Diploma Thesis II | 9 | both | | | | | |
| | Diploma Thesis III | 15 | both | | | | | |

TOTAL for obligatory courses (without thesis related) 27

Core elective courses - group 1

| | | | | | | | | |
|---------|--|---|---|---|---|---|---|--|
| NPFL006 | Introduction to Formal Linguistics | 3 | w | 3 | | | | |
| NPFL038 | Fundamentals of Speech Recognition and Generation | 5 | w | | 2 | 3 | | |
| NPFL068 | Statistical Methods in Natural Language Processing II | 5 | s | | | 3 | 2 | |
| NPFL070 | Language Data Resources | 4 | w | 2 | 2 | | | |
| NPFL075 | Dependency Grammars and Treebanks | 3 | s | | 2 | 1 | | |
| NPFL079 | Algorithms in Speech Recognition | 5 | s | | | 5 | | |
| NPFL082 | Information Structure of Sentences and Discourse Structure | 2 | s | | 2 | | | |
| NPFL083 | Linguistic Theory and Grammar Formalisms | 5 | s | 2 | 3 | | | |
| NPFL087 | Statistical Machine Translation | 5 | s | | | | 5 | |
| NPFL093 | NLP Applications | 4 | s | | | 4 | | |
| NPFL094 | Morphological and Syntactic Analysis | 3 | w | 3 | | | | |
| NPFL095 | Modern Methods in Computational Linguistics | 3 | w | | | | 3 | |
| NPFL097 | Unsupervised Machine Learning in NLP | 3 | w | | | | 3 | |
| NPFL099 | Statistical Dialogue Systems | 4 | w | | | 2 | 2 | |
| NPFL100 | Variability of Languages in Time and Space | 2 | w | | 2 | | | |
| NPFL103 | Information Retrieval | 5 | w | | | 3 | 2 | |
| NPFL104 | Machine Learning Methods | 4 | s | | | 2 | 2 | |

| | | | | | | | | |
|---------|-----------------------------------|---|---|---|--|--|---|---------|
| NPFL139 | Deep Reinforcement Learning | 8 | s | 2 | | | 6 | updated |
| NPFL128 | Language technologies in practice | 4 | s | 4 | | | | |

TOTAL offer of core elective courses - group 1 77

Core elective courses - group 2

| | | | | | | | |
|---------|------------------|----|------|------------------------|--|--|--|
| NPGR069 | Company Project | 6 | both | track depends on topic | | | |
| NPGR070 | Research Project | 9 | both | track depends on topic | | | |
| NPGR071 | Software Project | 12 | both | track depends on topic | | | |

maximum counted as core elective courses 6

Core elective courses - group 3

| | | | | | | | | |
|---------|--------------------------------|---|---|---|--|---|---|-------------------------------------|
| NAIL025 | Evolutionary Algorithms I | 5 | w | | | | 5 | |
| NAIL069 | Artificial Intelligence I | 4 | w | 4 | | | | |
| NAIL070 | Artificial Intelligence II | 3 | s | | | 1 | 2 | |
| NAIL104 | Probabilistic Graphical Models | 3 | w | | | 3 | | |
| NPGR036 | Computer Vision | 5 | s | | | 5 | | available also in English from 2023 |

maximum counted as core elective courses 10

Additional courses (not counted as core elective but recommended for LCT students)

| | | | | | | | | |
|---------|--|---|---|---|---|---|---|---------|
| NPFL012 | Introduction to Computer Linguistics | 3 | w | 3 | | | | |
| NPFL101 | Competing in Machine Translation | 3 | w | | | 3 | | |
| NPFL123 | Dialogue Systems | 5 | s | 2 | | 3 | | |
| NPFL124 | Natural Language Processing | 4 | s | 4 | | | | |
| NPFL125 | Introduction to Language Technologies | 3 | w | 3 | | | | |
| NPFL129 | Introduction to Machine Learning with Python | 5 | w | 3 | | 2 | | |
| NPFL140 | Large Language Models | 3 | s | | | | 3 | NEW !!! |
| NPFL141 | Linguistics | 2 | s | | 2 | | | NEW !!! |
| NJAZ097 | Czech for Beginners I | 3 | w | | 3 | | | |
| NJAZ098 | Czech for Beginners II | 3 | s | | 3 | | | |

TOTAL for additional courses 34

TOTAL offer of courses 185 44 21 43 50

Each student must pass all obligatory courses PLUS collect at least 40 credits for core elective courses

- at most 10 credits from group 2 (additional courses) and
- at most 6 credits from group 3 (project) are counted as core elective

Offer of free courses - please check the Student Information System

(all courses provided by the Faculty of Mathematics and Physics are available as free courses):

<https://is.cuni.cz/studium/eng/predmety/index.php>