

Courses not yet included in my Transcript

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This is a list of courses that I am currently taking in my senior year, and so not yet included in my official transcript attached with the application. However, these courses will be included in the final transcript.

1. **Name of the course:** Introduction to Artificial Intelligence
Course content:
History and philosophical foundations of AI, intelligent agents, problem solving by searching, propositional logic, predicate logic, resolution, logical reasoning systems, planning and acting.
2. **Name of the course:** Computer Vision
Course content:
Image enhancement, image operations, image filtering, feature detectors, image analysis, classification, labeling, segmentation, pyramidal architecture, morphology, projective geometry, stereo vision, point matching, 3D reconstruction, object recognition and tracking.
3. **Name of the course:** Neural Networks
Course content:
Basics of neural networks computing, neural networks models and learning methods.
4. **Name of the course:** Knowledge Representation and Reasoning
Course content:
What is “knowledge”, “representation“, and “reasoning“, propositional logic, first order logic, formalizing commonsense reasoning, model logic, non-monotonic logic, the logic of time, belief change and reason maintenance and the logic of causality.
5. **Name of the course:** Computer and Network Security
Course content:
Security planning, security policies, introduction to cryptography, authentication functions, computational cryptography, symmetric encryption, asymmetric encryption, hash functions, symmetric key exchange protocols, asymmetric key-distribution, network layer security, internet protocol security, internet key exchange, transport layer security, application layer security and wireless network security.

6. **Name of the course:** Compilers
Course content:
Lexical analysis, regular expressions, finite automata, syntax analysis, top down parsing, bottom up parsing, semantic analysis, top checking, symbol table, intermediate code generation, syntax directed translation, three address, code generation and optimization.
7. **Name of the course:** Machine Learning
Course content:
Probability Theory and linear algebra, linear classifiers, non linear classifiers, unsupervised learning, feature extraction, dimensionality reduction and reinforcement learning.
8. **Name of the course:** Mathematical Optimization
Course content:
Optimization techniques for different types of functions including global optimization techniques, such as simulated annealing and genetic algorithms, linear programming, as well as local optimization functions such as quasi-Newton and Nelder-Mead.
9. **Name of the course:** Advanced Computer Lab
Course content: Audio compression and psycho-acoustic model, introduction to Sphinx4 speech recognition engine, speech recognition and performance testing, corpora preparation and training acoustic models, speaker independent speech recognition and building a dialogue system using voiceXML.
10. **Name of the course:** Compilers Lab
Course content: Implementing lexical analyzers, syntactic analyzers and semantic analyzers from scratch as well as using the relevant automation tools. It also covers generating code into byte code or MIPS assembly.