1. **Course number and name**  
   CptS 440: Introduction to Artificial Intelligence

2. **Credits and contact hours**  
   3 credits, 3 lecture hours

3. **Instructor’s or course coordinator’s name**  
   Lawrence Holder

4. **Textbook, title, author, and year**  

5. **Specific course information**  
   a. *Catalog description*: An introduction to the field of artificial intelligence including search, knowledge representation, reasoning, uncertainty, learning, and perception.  
   b. *Prerequisites or corequisites*: Data Structures (CptS 122), Probability and Statistics (Math 212 or 360).

6. **Specific goals for the course**  
   By the end of the course, students will be able to  
   - Understand the major areas and challenges of AI  
   - Apply basic AI algorithms to solve problems (1b, 1d, 1e, 2g, 7c, 7d, 7f)  
   - Understand ethical issues in AI (4a, 4f)

7. **Brief list of topics to be covered**  
   - Introduction to AI and intelligent agents  
   - Uninformed and informed search  
   - Local search  
   - Adversarial search  
   - Introduction to logic and propositional logic  
   - First-order logic  
   - Logical inference  
   - Planning  
   - Uncertainty  
   - Probabilistic Reasoning  
   - Learning and Decision Trees  
   - Neural Networks, Probabilistic Learning, and Reinforcement Learning  
   - Natural Language Processing and Natural Language Communication  
   - Philosophical and Ethical Issues