

# Penn CIS 5210 - Chapter 2

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This course investigates algorithms to implement resource-limited knowledge-based agents which sense and act in the world. Topics include, search, machine learning, probabilistic reasoning, natural language processing, knowledge representation and logic. After a brief introduction to the language, programming assignments will be in Python. — Description of CIS 4210/5210 in course catalog

## 1 Chapter Two: Intelligent Agents

### 1.1 2.1 - Agents and Environments

**Agent** is anything that can be viewed as perceiving its environment through sensors and acting upon the environment through **actuators**.  
Agent behavior is mapped through a Mathematical function called **agent functions**. Internally, we look at the agent function as a **agent program**.  
The example in the book they use is vacuum world.  
**Rational Agent** is a mechanical agent that does the right thing at the right time.