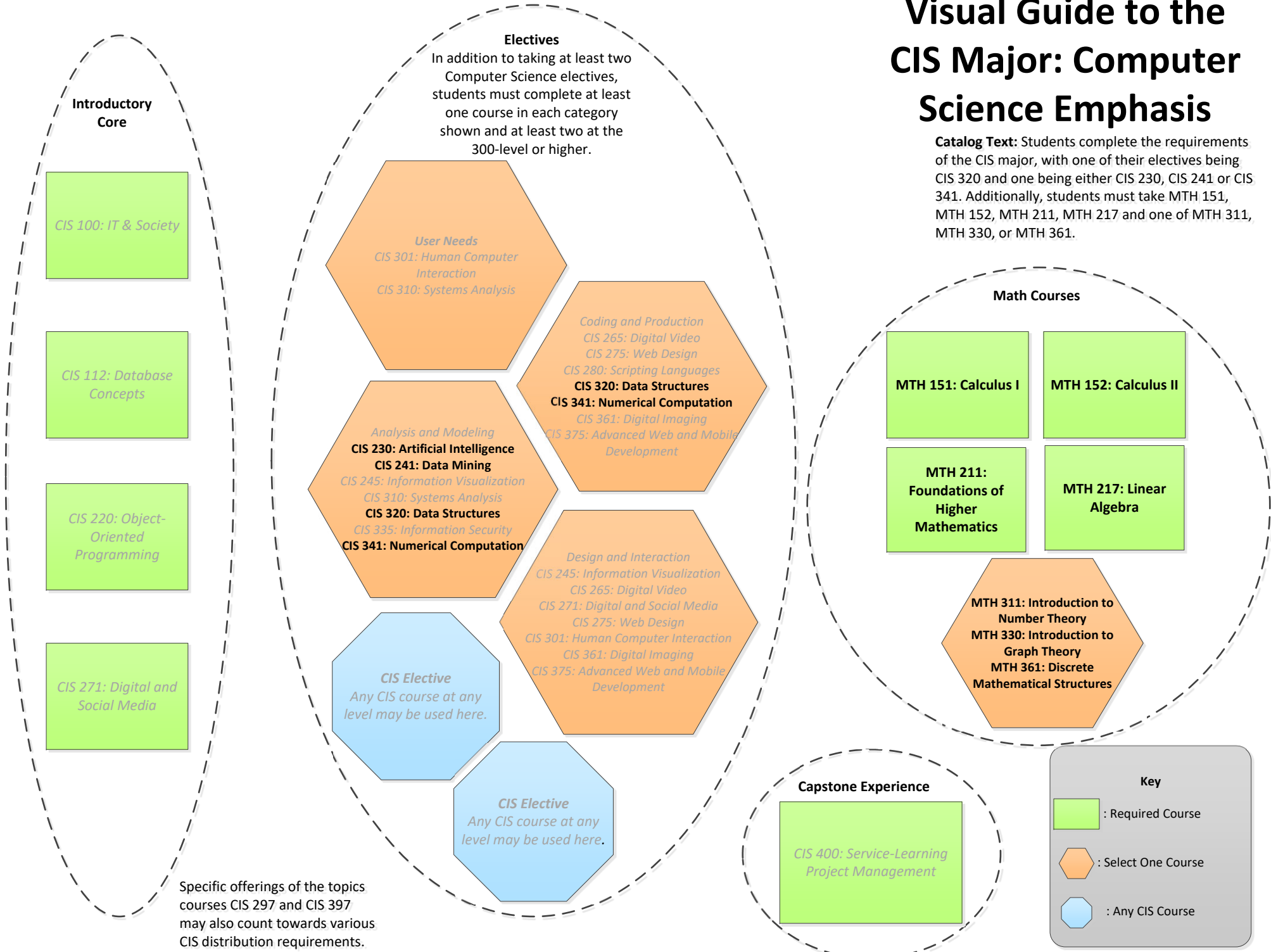


# Visual Guide to the CIS Major: Computer Science Emphasis

**Catalog Text:** Students complete the requirements of the CIS major, with one of their electives being CIS 320 and one being either CIS 230, CIS 241 or CIS 341. Additionally, students must take MTH 151, MTH 152, MTH 211, MTH 217 and one of MTH 311, MTH 330, or MTH 361.



## Introductory Core

*CIS 100: IT & Society*

*CIS 112: Database Concepts*

*CIS 220: Object-Oriented Programming*

*CIS 271: Digital and Social Media*

## Electives

In addition to taking at least two Computer Science electives, students must complete at least one course in each category shown and at least two at the 300-level or higher.

**User Needs**  
*CIS 301: Human Computer Interaction*  
*CIS 310: Systems Analysis*

**Coding and Production**  
*CIS 265: Digital Video*  
*CIS 275: Web Design*  
*CIS 280: Scripting Languages*  
**CIS 320: Data Structures**  
**CIS 341: Numerical Computation**  
*CIS 361: Digital Imaging*  
*CIS 375: Advanced Web and Mobile Development*

**Analysis and Modeling**  
**CIS 230: Artificial Intelligence**  
**CIS 241: Data Mining**  
*CIS 245: Information Visualization*  
*CIS 310: Systems Analysis*  
**CIS 320: Data Structures**  
*CIS 335: Information Security*  
**CIS 341: Numerical Computation**

**Design and Interaction**  
*CIS 245: Information Visualization*  
*CIS 265: Digital Video*  
*CIS 271: Digital and Social Media*  
*CIS 275: Web Design*  
*CIS 301: Human Computer Interaction*  
*CIS 361: Digital Imaging*  
*CIS 375: Advanced Web and Mobile Development*

**CIS Elective**  
 Any CIS course at any level may be used here.

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 Any CIS course at any level may be used here.

## Math Courses

**MTH 151: Calculus I**

**MTH 152: Calculus II**

**MTH 211: Foundations of Higher Mathematics**

**MTH 217: Linear Algebra**

**MTH 311: Introduction to Number Theory**  
**MTH 330: Introduction to Graph Theory**  
**MTH 361: Discrete Mathematical Structures**

## Capstone Experience

*CIS 400: Service-Learning Project Management*

Specific offerings of the topics courses CIS 297 and CIS 397 may also count towards various CIS distribution requirements.

## Key

- : Required Course
- : Select One Course
- : Any CIS Course