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<th>Semester Hours:</th>
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<tr>
<td>Coordinator:</td>
<td>Robert Dyer</td>
<td>Text:</td>
<td>Selected Works from Multiple Sources</td>
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<td>Author(s):</td>
<td>VARIOUS</td>
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**SPECIFIC COURSE INFORMATION**

*Catalog Description:*
Fundamental concepts of languages. Processors, data, operations, sequence control, data control, storage management, syntax, translation. Prerequisite: CS 2170 and CS 3350.

**Course type:** ELECTIVE

**SPECIFIC COURSE GOALS**

- I can explain the difference between a compiler and interpreter.
- I understand and can implement the different phases of a compiler (e.g., lexical, syntactic, semantic, code generation).
- I can explain parser error recovery techniques.
- I know how to translate abstract syntax trees into an intermediate language.
- I understand source code optimization techniques.

**LIST OF TOPICS COVERED**

- Introduction (1 week)
- Compilers (4 weeks)
- Implementation of Language Features (3 weeks)
- Error Analysis and Recovery (1 week)
- Symbol Tables (1 week)
- Role of Linker (1 week)
- Code Optimization (2 weeks)
• Differences Between Compilers & Interpreters (1 week)