**Learning Schedule for ARCS Senior Design**

**Test Case Generator**

* Compiler Design
  + Compiler Design Videos by Professor Dewey
  + **<Optional>** Compiler design: Modern Compiler Implementation in Java/ML/C (these are each separate books)
  + <modern_compiler_desig_c_implementation.pdf>
* HSMs
  + Intro to HSMs **Videos by Professor Dewey**
  + [**Key concept: Finite State Machine (FSM) (state-machine.com)**](https://www.state-machine.com/fsm#HSM)
  + [**QP/C: State Machines (state-machine.com)**](https://www.state-machine.com/qpc/srs_sm.html)
  + [**QP/C: Active Objects (state-machine.com)**](https://www.state-machine.com/qpc/srs_ao.html)
* Proteus
  + Intro to Proteus Videos by Professor Dewey
* Test Case Generation

**Testing**

**FPP + Proteus**

* Compiler Design
  + Compiler Design Videos by Professor Dewey
  + **<Optional>** Compiler design: Modern Compiler Implementation in Java/ML/C (these are each separate books)
* F Prime
  + <https://nasa.github.io/fprime/UsersGuide/guide.html>
  + <https://github.com/fprime-community/fprime-tutorial-hello-world>
  + <https://github.com/fprime-community/fprime-tutorial-math-component>
* FPP
  + <https://fprime-community.github.io/fpp/fpp-users-guide.html>
* Scala
  + [Get functional with Scala 3 (linkedin.com)](https://www.linkedin.com/learning/introduction-to-scala/get-functional-with-scala-3?resume=false&u=56684793)
  + <https://github.com/fprime-community/fpp/wiki/Pure-Functional-Programming-in-Scala>
  + **<Optional>** <https://www.manning.com/books/functional-programming-in-scala>
* HSMs
  + Intro to HSMs **Videos by Professor Dewey**
  + [**Key concept: Finite State Machine (FSM) (state-machine.com)**](https://www.state-machine.com/fsm#HSM)
  + [**QP/C: State Machines (state-machine.com)**](https://www.state-machine.com/qpc/srs_sm.html)
  + [**QP/C: Active Objects (state-machine.com)**](https://www.state-machine.com/qpc/srs_ao.html)
* Proteus
  + Intro to Proteus Videos by Professor Dewey

**QM to Proteus**

* Compiler Design
  + Compiler Design Videos by Professor Dewey
  + **<Optional>** Compiler design: Modern Compiler Implementation in Java/ML/C (these are each separate books)
* HSMs
  + Intro to HSMs **Videos by Professor Dewey**
  + [**Key concept: Finite State Machine (FSM) (state-machine.com)**](https://www.state-machine.com/fsm#HSM)
  + [**QP/C: State Machines (state-machine.com)**](https://www.state-machine.com/qpc/srs_sm.html)
  + [**QP/C: Active Objects (state-machine.com)**](https://www.state-machine.com/qpc/srs_ao.html)
* QM Modeling Tool
  + [(8) QM Model-Based Design Tool Tutorial - YouTube](https://www.youtube.com/watch?v=VJpTJaGPrVk)
* XML
  + [XML Introduction (w3schools.com)](https://www.w3schools.com/XML/xml_whatis.asp)
* Proteus
  + Intro to Proteus Videos by Professor Dewey