

University of Massachusetts Dartmouth  
Department of Electrical and Computer Engineering

ECE 160  
Tentative Syllabus - Spring 2020

For Due Dates see:  
<http://ece160.org>

| Cls | Date     | Day | Topics (pages)  | Lab                                     | Project handout/Notes              |
|-----|----------|-----|---|---|------------------------------------|
| 1   | 01/22/20 | Wed | Course Intro/History of Computers                                   | No Lab                                  | Syl/Intro/Checkoff sheet           |
| 2   | 01/24/20 | Fri | Binary/Decimal/Hex (notes)  |   | Prj 1:numbase.txt (1-13) (handout) |
| 3   | 01/27/20 | Mon | counting in other number bases, conversion 2-4-8-16                 | Lab 0: Intro to Lab (nothing handed in) | TUES 1/28 Last Day to Add/Drop     |
| 4   | 01/29/20 | Wed | bitwise and/or/xor/compliment/shift (TUE 1/28=last day to add/drop) | Lab 0: Intro to Lab (nothing handed in) |                                    |
| 5   | 01/31/20 | Fri | Constants/Variables/Keywords (1-15)                                 |   |                                    |
| 6   | 02/03/20 | Mon | First Program/printf/scanf (16-28)                                  | Lab 1: numbase.txt (14-25)              | Prj 2:bittwittle.txt (handout)     |
| 7   | 02/05/20 | Wed | if/if else (37-48)  | Lab 1: numbase.txt (14-25)              |                                    |
| 8   | 02/07/20 | Fri | arithmetic/logical operators (48-59)                                |   |                                    |
| 9   | 02/10/20 | Mon | while (75-83)   | Lab 2:interest.cpp                      | Prj 3: evalexpr.txt (handout)      |
| 10  | 02/12/20 | Wed | for (83-89)   | Lab 2:interest.cpp                      |                                    |
| 11  | 02/14/20 | Fri | do-while, break, continue, case (105-116)                           |   |                                    |
| 12  | 02/18/20 | Tue | nested for loops (89-104) happy numbers !! TUE IS MON !!            | Lab 3: payroll.cpp                      | Prj 4: convchart.cpp (handout)     |
| 13  | 02/19/20 | Wed | Nested loops example cows pigs hens                                 | Lab 3: payroll.cpp                      |                                    |
| 14  | 02/21/20 | Fri | Exam #1 PRE-REVIEW  |   |                                    |
| 15  | 02/24/20 | Mon | EXAM #1   | No Lab                                  | Prj 5: stars.cpp (handout)         |
| 16  | 02/26/20 | Wed | Exam #1 - POST REVIEW   | ATmega 1: LED-cycle-R-M-B-C-G-Y-R       |                                    |
| 17  | 02/28/20 | Fri | Intro to functions (117-131)  |   |                                    |
| 18  | 03/02/20 | Mon | Call by value/address (134-154 skip recursion)                      | ATmega 1: LED-cycle-R-M-B-C-G-Y-R       | Prj 6: dayofweek.cpp (handout)     |
| 19  | 03/04/20 | Wed | Call by value - the details (134-154)                               | ATmega 2:buttons-hold-for-rgb           |                                    |
| 20  | 03/06/20 | Fri | Call by address - the details (165-183)                             |   |                                    |
|     |          |     | SPRING BREAK  |   |                                    |

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| 21  | 03/16/20 | Mon | Intro to arrays/big/small/average (217-223)             | ATmega 2:buttons-hold-for-rgb       | Prj 7: gencal.cpp (handout)       |
| 22  | 03/18/20 | Wed | sorting arrays (notes)                                  | ATmega 3:PWM/ADC                    |                                   |
| 23  | 03/20/20 | Fri | passing arrays to function/pointers (223-232)           |                                     |                                   |
| 24  | 03/23/20 | Mon | Array examples - typedef (notes, 409-411)               | ATmega 3:PWM/ADC                    | Prj 8: complex.cpp (handout)      |
| 25  | 03/25/20 | Wed | Array sorting   | ATmega 4:single-digit-down-clr-up   |                                   |
| 26  | 03/27/20 | Fri | File I/O (331-351)                                      |                                     |                                   |
| 27  | 03/30/20 | Mon | EXAM #2 PRE-REVIEW                                      | ATmega 4:single-digit-down-clr-up   | Prj 9: bigsmall.cpp (handout)     |
| 28  | 04/01/20 | Wed | EXAM #2   | No Lab                              |                                   |
| 29  | 04/03/20 | Fri | EXAM #2 POST-REVIEW                                     |                                     |                                   |
| 30  | 04/06/20 | Mon | Array example BigNum part 1                             | ATmega 5:fixed-four-digit-hex       | Prj 10: modefile.cpp (handout)    |
| 31  | 04/08/20 | Wed | Array example BigNum part 2                             | ATmega 5:fixed-four-digit-hex       |                                   |
| 32  | 04/10/20 | Fri | 2D arrays (232-240) ** LAST DAY TO W **                 |                                     | Prj 11: eee.cpp (handout)         |
| 33  | 04/13/20 | Mon | Strings part 1 (276-283)                                | ATmega 6:four-digit-hex-down-clr-up |                                   |
| 34  | 04/15/20 | Wed | Strings part 2 (276-283)                                | ATmega 6:four-digit-hex-down-clr-up |                                   |
| 35  | 04/17/20 | Fri | File I/O with strings (331-351)                         |                                     |                                   |
|     | 04/20/20 | Mon | PATRIOTS DAY NO CLASSES                                 |                                     | Prj 12:stutestnames.cpp (handout) |
| 36  | 04/22/20 | Wed | formatted output, sprintf/sscanf (313-326) !! MON SCHED | ATmega 7: four-digit-pots           | Extra Credit: baseconversion.cpp  |
| 37  | 04/24/20 | Fri | EXAM #3 PRE-REVIEW                                      |                                     |                                   |
| 38  | 04/27/20 | Mon | EXAM #3   |                                     |                                   |
| 39  | 04/29/20 | Wed | SINGLE MAKE UP EXAM                                     | ATmega 7: four-digit-pots           |                                   |