# MC300 Class Schedule – Spring, 2010[MC300 Home Page](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5CMC300-Spring2010.htm)

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| Week / Text | Lecture / Discussion | Reference | Assignment |
| Jan. 26*Ch. 1* | Course Introduction, Intro to Modern Control Theory, MatLab/Octave | ***Get ahead in your reading***[**Lecture01**](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture01.pdf)**,** [**Guide to Classical Control**](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5Cclassic_control.pdf)**,**[**Control Tutorials for MATLAB and Simulink**](http://www.engin.umich.edu/class/ctms/)**,** [**The MatLab Language**](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5CMatLab%5CThe_MatLab_Language.ppt)**,** [**MatLab Tutorial**](file:///D%3A%5Chtdocs%5CCourses%5CTopics%5CMatlab%5CIndex.htm) | [**ProblemSet1**](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5CProblemSet1.doc)[**ProblemSet1 - Solutions**](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5Cps1sol.pdf) |
| Feb. 2Ch. 2.1-2.7, 2.9-2.10 | Mathematical Models of SystemsLaplace Transforms | [Lecture02](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture02.pdf), [Lecture03](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture03.pdf), [Lecture04](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture04.pdf),[Laplace](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CEE301%5CEE235%5CEE235%5CProject%5Clesson21%5Clesson21.html)****,**** [Laplace Properties](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CEE301%5CEE235%5CEE235%5CProject%5Clesson22%5Clesson22.html)****,**** [Laplace & LTI](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CEE301%5CEE235%5CEE235%5CProject%5Clesson23%5Clesson23.html) | E2.4, E2.6, E2.27, P2.2, P2.12, P2.36 (a & c), CP2.2 (by hand, without MatLab), CP2.3 |
| Feb. 9Ch. 3.1-3.7, 3.10-3.11 | State Variable ModelsLinear Algebra Review | [Lecture05](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture05.pdf), [Lecture06](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture06.pdf), [Lecture06b](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture06b.pdf), [Lecture07](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture07.pdf) | E3.6, E3.9, E3.13, E3.21, P3.7, P3.32, P3.34, CP3.4 |
| **Feb. 16** | **Tuesday is Monday – No Class** | **Try to make it to “Active Noise Cancellation” in McA102 at 6 pm on Tuesday Feb. 16** |  |
| **Feb. 17**Ch*.* 3.10-3.11, 4.1-4.4 | State Variables (cont.), Linear Algebra (again)Feedback System Characteristics | [Lecture08](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture08.pdf), [Lecture09](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture09.pdf), [Lecture10](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture10.pdf), [Lecture11](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture11.pdf)In Bannow 166 |  E4.3, E4.4, E4.7 (a), (c), (d), E4.13, P4.15, AP4.5, DP4.3, DP4.5 |
| Feb. 23Ch., 4.8, 12.1-12.2 | Design Examples, System Sensitivity**Review for Exam 1** | [Lecture12](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture12.pdf)  | Study for Exam 1Chapters 1-3, 4.1-4.4 |
| Mar. 2Ch. 5.2-5.4, 5.8 | **Exam 1: Ch. 1 – 4.4**System Performance | [Lecture13](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture13.pdf), [Lecture14](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture14.pdf) | E5.6, E5.7, E5.9, E5.10, P5.1, P5.4, P5.19, DP5.6 |
| **Mar. 9** | **Spring Break – No Class** |  |  |
| Mar. 16Ch. 6.1-6.3 | **Exam 1 reprise**Stability, Root Locus  | [Lecture15](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture15.pdf), [Lecture16](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture16.pdf) |  |
| Mar. 23Ch. 7.1-7.4, 7.7-7.8, 7.10 | Root Locus (cont.)PID | [Lecture17](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture17.pdf), [Lecture18](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture18.pdf), [Lecture19](file:///D%3A%5Chtdocs%5CCourses%5CBEI%5CMC300%5COishi%5CLecture19.pdf) |  |
| Mar. 30Ch. 8.1-8.3 | Frequency Response | 9 |  |
| Apr. 6Ch. 8.4-8.5, 10.1-10.3 | Specifications,Control System Design | 10 |  |

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| Apr. 13Ch. 10.4, 10.6, 10.8, 11.1-11.3 | Control System Design (cont.) | 11 |  |
| Apr. 20Ch. 11.4-11.8 | State Variable System Design**Review for Exam 2** | 12 | Study for Exam 2Chapters 4.8, 5 - 10 |
| Apr. 27 | ****EXAM 2********Ch. 4.8 - 10**** | 13 |  |
| May. 4 | Exam 2 repriseReview for Final Exam | 14 |  |
| May. 11 | **FINAL EXAM** Cumulative, Covers all topics  from Jan 26 through May 4 | **15** |  |

## Lecture Note Errata

Lecture 5, slide 26: Below 'In matrix form', insert 'x(t)' after the 2x2 matrix.