

**MA 105 – Mathematics of Finance Spring 2019**  
**North Carolina State University**  
**Department of Mathematics**

All Students in MA 105 must provide their own business calculator. It is recommended that students purchase the **HP-10BII** business calculator since the course is instructed using that model. Students who choose to use a different calculator are responsible for learning to use it on their own. Students can purchase the calculator for approximately \$30 - \$35 at local stores as well as at the student bookstore. Instructors should go to 2108 SAS Hall for a calculator.

Business calculators are used in the classroom beginning in Chapter 3. A videotape on using the **HP-10BII** is available for faculty and students use in SAS Hall 2105A.

MA 105 is taught using *Mathematics of Finance* written by Marilyn S. McCollum. Instructors should obtain a copy from Carolyn Gunton in SAS Hall 2109. The free on-line manual for faculty and students is available, contact Molly Fenn and/or Carolyn Gunton to obtain it.

All homework assignments and lab assignments for MA 105 are submitted through WebAssign. <http://webassign.ncsu.edu> Web-Assign is the only type of homework grading available for MA 105, so any other assignments or quizzes that you choose to give will have to be handled/graded by you. MA 105 instructors unfamiliar with WebAssign should see **Seyma Bennett-Shabbir** as soon as possible. She can give you an introduction to WebAssign in 15 – 20 minutes.

WebAssign closely follows the lecture notes. All problems have randomized numbers so it is highly unlikely that two students will have the same problem. You should frequently remind students of WebAssign due dates. Also warn them that lack of planning on their part does not constitute an extension of the assignment. It is a serious mistake for students to procrastinate on any assignment because the system might go down at any time. Students should be encouraged to work well **AHEAD** of the schedule. Instructors may elect the **“Self- Extension”** policy with penalty. Ask Jennifer George Burt to set WebAssign "self-extensions with penalty". Be sure you understand how this works before you choose this.

WebAssign is purchased online by each student at <http://webassign.ncsu.edu>

Note: Students should be aware that having difficulties with their computer accounts does not exempt them from doing the assignments. Students are responsible for **ALL** WebAssign and labs in this course. If a student has difficulties with his/her computer account, he/she is responsible for getting this problem taken care of within a reasonable period of time (I recommend giving them the first week of class) and notifying the instructor of these difficulties so that extensions can be given on assignments if necessary.

Below is a sample grading distribution for MA 105. Feel free to make changes to it to suit your class.

TESTS:	55%
WebAssign/Quizzes:	20%
Final Exam:	25%

Please follow the university guidelines for an excused absence from a test for allowing a make-up test  
<https://policies.ncsu.edu/regulation/reg-02-20-03-attendance-regulations/>

A course outline (which includes corresponding WebAssign assignments) is attached. Modify this to suit your class as needed.

## MA 105 FALL 2018 SCHEDULE

WEEK	TOPICS	LECTURE NOTES	WEBASSIGN ASSIGNMENTS
<b>1 (short week)</b>	Time Diagrams/SI Formulas	Pgs 1 - 6	
<b>2</b>	Decision Making-Problems/Exact and Approximate Time	Pgs 6 - 9	
	Exact and Approximate Time/Promissory Notes	Pgs 9 - 15	HW 1, HW 2
<b>3</b>	Equations of Value/Merchants' Rule	Pgs 15 - 19	HW 3, HW 4
	US Rule/Bank Discount Formulas	Pgs 19 - 23, 25 - 28	HW 5, HW 6
<b>4</b>	Bank Discount Formulas/Equivalent Rate	Pgs 28 - 31	Simple Int Lab
	<b>Test 1</b>		HW 7, Sample Test 1
<b>5</b>	Compound Interest Formula	Pgs 32 - 43	
	Finding N/Interest For Part of Conversion Period/ Using HP-10B	Pgs 44-48	HW 8
<b>6</b>	Using HP-10B/Effective Rates	Pgs 48 - 51	Compound Int Lab
	Equations of Value/Intro to Annuities	Pgs 51- 53, 55 - 57	HW 9
<b>7 (short week)</b>	Ordinary Annuities/Annuity Dues	Pgs 58 - 64, Worksheet	
<b>8</b>	Forborne/Deferred Annuities	Pgs 65 - 68	HW 10, HW 11
	Forborne/Deferred Annuities	Pgs 74 - 75	Ordinary Annuity Lab
<b>9</b>	<b>Test 2</b>		HW 12, Sample Test 2
	Finding N and Smaller Concluding Pmt	Pgs 70 -73	
<b>10</b>	General Annuities	Pgs 77 - 78	HW 13
	General Annuities/Amortization	Pgs 78 - 81	
<b>11</b>	Amortization/Refinancing/Extra Practice	Pgs 81 - 83	HW 14, Retirement Lab
	Extra Practice with Amortization/Sinking Funds	Pgs 83 - 85	
<b>12</b>	Sinking Funds/Extra Practice with Sinking Funds	Pgs 85 - 88	HW 15
	<b>Test 3</b>		HW 16, Sample Test 3
<b>13-14 (short week)</b>	Perpetuities/Capitalized Costs	Pgs 89 - 96	Home Loan Lab
<b>15</b>	Review		HW 17, HW 18
	<b>Exams</b>		
	<b>Exams</b>		