First this schedule is highly tentative. We will be adapting a changing as the circumstances of the pandemic changes and as our class size and needs change. This hybrid flex schedule (see table below) has been carefully crafted with the aim of your highest quality of learning in mind.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Math 170 MWF | M | Online lec (usually) | W | Metacog hw (sometimes online HW or free) | F |
| 8.24 | Norming ex/ QFT on MVT |  | 2.1/3.1 IBL online textbook resource |  | 3.2/3 |
|  |  | Syll/metacog/liberal arts |  | Francis Su [Notice/Wonder] |  |
| 8.31 | 3.4 |  | 3.5  #1 RULES DRILL |  | 3.6 |
|  |  | 3.3 |  | bloom |  |
| 9.7 | No class |  | 3.10 IBL  #2 RULES DRILL |  | 3.10 IBL |
|  |  | 3.7 |  | 3.8 |  |
| 9.14 | 3.9  #3 RULES DRILL |  | Ch3 mastery test |  | 2.2 |
|  |  | review |  | Intro to rational approximation via continued fractions spirals /Assign NUM METH project |  |
| 9.21 | Approximation QFT 1.4<sqrt2<1.5 |  | QFT part2 Assign limits flow chart(preview text find methods and name them) |  | 2.3 |
|  |  | 2.2/3 |  | Meta og Study video (notice/wonder) |  |
| 9.28 | 2.3 |  | 2.5 |  | 2.6 Horizontal asymptote in Num methods |
|  |  | 2.4 |  | ------ |  |
| 10.5 | 4.5 |  | Flow chart workday |  | Ch2 Limits TEST |
|  |  | Review |  | [Flow chart due] | [Reflection due Friday] |
| 10.12 | 4.7  geogebra |  | Project workday |  | Project workday |
|  |  | Spreadsheet intro |  | mindset |  |
| 10.19 | 4.1 |  | mean Geoclass |  | 4.3 |
|  |  | 4.2 |  | Discussion: A great graph communicates the following essential characteristics: |  |
| 10.26 | 4.3  E. S.S.S.AY intro |  | 4.4 |  | ESSSAY group work |
|  |  | --advising day-- |  |  |  |
| 11.2 | 4.4 |  | 4.6 workday |  | 4.6/ E.S.S.S.Ay workday |
|  |  | 4.6 |  | review |  |
| 11.9 | test |  | 5.2 |  | 5.2 |
|  |  | 5.1 lnx num method [reflection due] |  |  |  |
| 11.16 | 5.3 Mean essay assigned |  | Discussion: Mean QFT |  | 5.4  Integro-differential spectrum #1 RULES DRILL |
|  |  | 5.4 |  |  |  |
| 11.23 | 5.4  #2 RULES DRILL |  | No class |  | No class |
|  |  | 5.5[MeanVT essay due] |  |  |  |
| 11.30 | 5.5 help  #3 RULES DRILL |  | 5.6 |  | Ch5 integral rules MASTERY TEST |
|  |  | 5.6 |  | review |  |
| 12.7 | Adopt a function demo |  | Adopt workday |  | No class  Opt workday |
|  |  | Fin Rev |  | Fin Rev |  |

Grading: This course is partial mastery-based grading, a method where by you are allow a certain number of attempts to master a technique. Early mastery becomes a cushion on you grade against doing poorly on the same type of problem later. At the same time the final goal of mastery is maintained such that early failure do not weight down later success. This is true of the drill quizzes relative to their tests. Also in the grading breakdown you will see “mastery pts\*” followed by a section number. These are sections with dedicated face-to-face workdays in which you will be better able to benefit from my expertise as you tutor and from peer interaction. You can be excused from the associated question in these sections on the test by proving your mastery ahead of time. Here is how: work diligently on the assigning inquiries during the workday, interacting with myself and your peers to deepen your understanding and to learn how to talk skillfully about the problems. Then after class pick one or two problems that stood out to you. In short computational essay explain why the stood out and how to solve them. Explain the significance of the solution with units and why is seem likely or unlikely to be true. While a perfectly correct answer is ideal, the goal is to demonstrating your depth of understanding about the vocabulary and the nature of the problems/methods and reflection beyond mere execution of the technique. I will grade it on a scale of 1-5 as follows

5: Correct math and elegant description with largely correct use of vocab and notation. Associated test question may be skipped with full credit

4: Either the math or the description is lacking something but is remained apparent that the method is largely understood. Associated test question may be skipped with 80% credit

3: Either the math or the description is lacking something significant, but there is evince of understanding and technical skill. For example the math is correct but there is little evidence of deep understand just adequate technical executions. Associated test question should be attempted but will not be worth lest that 70% as long as it has a good start.

2: computational math is significantly wrong either in notation or method but the understanding and description of the method is laudable. Associated test question should be attempted but will not be worth lest that 50% as long as it has a good start.

1: work is messy, little evidence that this more that class work turn in without a second draft. No mastery pts earned.

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| --- | --- | --- | --- | --- | --- |
| Weight | Category | Breakdown ratio | Relative part descriptions | | Remarks |
| 20% | Formative | 50/50 | homework: assign turn-in bookwork and youtube video reflections | Classwork: participation in projects/activities especially turn-in parts | All homework and classwork (except mastery drills) is turned in twice weekly on Mondays and Wednesday online in canvas before noon. This is to prevent the spread of germs. |
| 10% | Ch3 test: diff rules mastery + application | 70/30 | In-class test: applied derivative rules | In-class test: synthesis Mastery pts\* 3.10 workday | Ch3 contains a body of derivative rules that must be able to be applied in a mix and match fashion. Because mastery is essential, there are three drills outside the test for you to prove yourself on. If mastered in the drills your drill scores will be averaged into the test improving your test score. If not, your test score will stand on its own merit. |
| 10% | Ch2 Flowchart and test | 50/50 | In-class test  Mastery pts\* 2.3 workday | Flowchart with 5 explained examples | 5% e.c. for reflection on the learning to testing process including changes from last time and goal for next time |
| 10% | Numeric approx. Midterm project | 60/40 | Excel tables of computations | Short essay questions | Multiple presentations and workday throughout the term will gradually leading you from open-end scientific speculation to narrowing guidelines of what the final product must include. |
| 10% | Ch4 E.S.S.S.AY. and test | 60/40 | In-class test  Mastery pts\* 4.6 workday | E.S.S.S.AY. graph and annotated computations | 5% e.c. for reflection on the learning to testing process including changes from last time and goal for next time |
| 10% | Ch5 test: int rules mastery + area analogy | 70/30 | In-class test: applied integral rules | In-class test: synthesis  Mastery pts\* 5.2 workday | Ch5 contains a body of integral rules that must be able to be applied in a mix and match fashion. Because mastery is essential, there are three drills outside the test for you to prove yourself on. If mastered in the drills your drill scores will be averaged into the test improving your test score. If not, your test score will stand on its own merit. |
| 10% | Course narrative essay: Mean Value Theorem | 80/20 | 1 ½-2 pages narrative | 1½ to 2 pages graphics and computations | Multiple presentations and workday throughout the term will gradually leading you from open-end scientific speculation to narrowing guidelines of what the final product must include. |
| 20% | Final exam | 80/20 | In-class test | Adopt a function | Adopt a function is a chapter spanning take home portion of the final in which one function is explored via all of the lenses through which calculus is applied in this course. |