Astronomy 16 Special Topic: Astrophysics Lab

TENTATIVE COURSE SCHEDULE

Class Meets: Mondays, Tuesdays and Thursdays, 2:30-4:45 pm

(https://tufts.zoom.us/j/94747257116)

Lecture 1	Tuesday	June 30	Course intro + Numerical Methods I: root finding
Lecture 2	Thursday	July 2	Python Session
Lecture 3	Monday	July 6	Numerical Methods II: interpolation & extrapolation
Lecture 4	Tuesday	July 7	Numerical Methods III: integration

PROJECT 1 DUE TUESDAY, JULY 7TH BY 11:59PM EST

Lecture 5	Thursday	July 9	Statistics I: probability, Bayes' theorem, probability distributions

PROJECT 2 DUE MONDAY, JULY 13TH BEFORE START OF CLASS

Lecture 6	Monday	July 13	Statistics II: Bayesian inference, Monte Carlo generators, statistics and error analysis
Lecture 7	Tuesday	July 14	Numerical Methods IV: random numbers

PROJECT 3 DUE WEDNESDAY, JULY 15TH BY 11:59PM EST

Lecture 8	Thursday	July 16	Numerical Methods IV: random numbers

PROJECT 4 DUE MONDAY, JULY 20TH BEFORE START OF CLASS

Lecture 9	Monday	July 20	Data fitting
Lecture 10	Tuesday	July 21	Project 5: magnitudes/colors of stars/galaxies
Lecture 11	Thursday	July 23	Project 5: magnitudes/colors of stars/galaxies

PROJECT 5 DUE MONDAY, JULY 27TH BEFORE START OF CLASS

Lecture 12	Monday	July 27	Project 6: SNIa and dark energy
Lecture 13	Tuesday	July 28	Project 6: SNIa and dark energy
Lecture 14	Thursday	July 30	Project 6: SNIa and dark energy

PROJECT 6 DUE FRIDAY, JULY 31ST BY 11:59PM EST

Lecture 15	Tuesday	Aug. 3	Project 7: Measure the rotation curve of galaxy
Lecture 16	Tuesday	Aug. 4	Project 7: Measure the rotation curve of galaxy
Lecture 17	Thursday	Aug. 6	Project 7: Measure the rotation curve of galaxy

PROJECT 7 DUE FRIDAY, AUGUST 7TH BY 11:59PM EST