Class: 2nd Sem (H) & 4th Sem (M)
Paper: ECNHC 202 & ECOM 401 (Maths)
Topic: Syllabus (Part)

~~Despite your unconcerned attitude towards ONLINE classes, I am resuming my notes after a gap.~~

The portion that I will be teaching to 2nd Sem Honours Students (Paper: ECNHC 202) is given below:

Unit 2.
Linear Algebra (Matrices and Determinants)

Systems of Linear equations
Properties of their Solution Sets
Matrices: Elementary Operations:
Matrix Addition, Product, Rank of a Matrix,
Determinants and their properties
Inverse of a Matrix
Application of & Cramer's Rule for solution
of a System of linear equations.

Here, while teaching we have to jump the sequence of the Syllabus — Unit.
We first begin by understanding Matrix
[The syllabus presumes that you already have basic knowledge of Matrix — which you don't have as most of you did not have Maths in your 12th (HS)]

So, we ~~introduce~~ the basics of Matrix — its & symbol, dimension, Row-Column etc. We also have to know its general form — again RC — Row-Column.

Then comes Types of Matrices for which we must know 'Principal Diagonal', 'Vector' etc
Here we get into touch of 'System of linear equations' — especially 'Simultaneous Equations' — Knowns and Unknowns. Simultaneous equations will lead us to 'Matrix Format':

$$AX = C$$

which will have to be discussed at a later stage.

We then try to understand Matrix 'Operators'
~ Operations — Plus, Minus, Multiplication and
Division. Plus and Minus follow same rule also
called Addition/Subtraction — ~~usely~~ usually
written as $\pm$. Multiplication is also called
'Product' where specific rules of dimensions
apply — (m×n) (n×p). Division is not
studied at this stage.

We then go on to understand the following:
1) Transpose   2) Determinant (Although properties
of Determinant are mentioned in the Syllabus,
it can be safely studied later).

3) Matrix Inversion Through Cofactor Method, and
4) Matrix Inversion Through Cramer's Rule.

Finally, we have to look into Economic
Application of Cramper's Rule.
What is left out is 'Rank' of a matrix,
which can be easily dealt with, in-between,
at appropriate stage.
This closes your Unit 2 which I need to
teach you.
Since only one part is left, — Cramer's
Rule — ~~we~~ I thought you ~~need~~ to ~~teach~~ revise
what have been taught in class — to
synchronize of those who were absent/~~irre~~
gular in class along with the same ~~topic~~
~~for~~ 4th Sem Major who also deal with the same topics.

~~As 2nd Sem Honours (CBCS) will be appearing~~
~~for the 1st time, you will not find any~~
~~previous Questions. Therefore, you will have~~
~~to choose your relevant Questions from~~
~~4th Sem Major. So, better be in touch with~~
~~your seniors.~~

— x —

NB. I will get this uploaded in our College Website
soon.