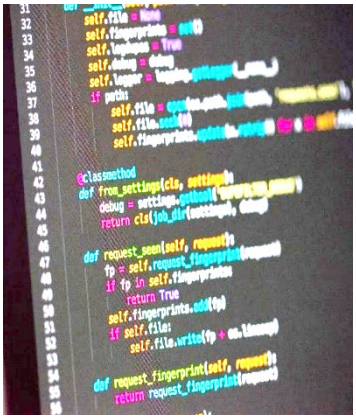
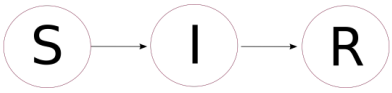
BN4206 COMPUTATIONAL METHODS IN BIOMEDICAL ENGINEERING

WHAT IS THIS COURSE ABOUT?

This course will cover some computational techniques that are used in the biomedical industry and research. The emphasis is on in-depth understanding through coding. Most of the time spent in class is devoted to coding the techniques that are explained in pre-recorded video lectures. Case studies are carefully selected to be relevant to the biomedical industry and include, amongst others, predicting outcomes of pandemics, predicting adverse effects of drugs, and optimizing design parameters such as flow rate of bioreactors of elastic material properties of biomedical devices.





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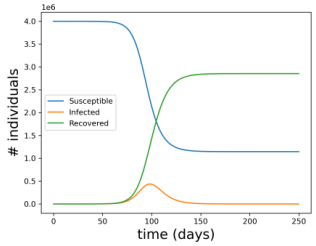

WHY YOU SHOULD CONSIDER THIS COURSE

This course will sharpen your coding skills in Python (consistently ranked amongst the most used programming languages), which will be useful in any chosen career. Topics such as optimization and solution of differential equations are essential parts of any engineer's toolkit. Additionally, this course provides an introduction to bioinformatics, which is becoming more and more relevant. In this course, you will gain hands-on experience on these methods by coding the key components of the algorithms, running simulations and learn how to interpret results.

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