



## Simulation Model - Equations

### Stocks

First Year= INTEG (Entrants-(Progression12+Repeat1), 1000)

Second Year= INTEG (Join 2+Progression12-Progression23-Repeat 2, 1000)

Third Year= INTEG (Join3+Progression23-Progression34-Repeat 3, 1000)

Fourth Year= INTEG (Join4+Progression34-Graduates, 1000)

Repeat First Year= INTEG (Repeat1-Join 2,0)

Repeat Second Year= INTEG (Repeat 2-Join3, 0)

Repeat Third Year= INTEG (Repeat 3-Join4, 0)

### Flows

Entrants=1000

Progression12=First Year\*PF1

Progression23=Second Year\*PF2

Progression34=Third Year\*PF3

Graduates=Fourth Year\*PF4

Repeat1=(1-PF1)\*First Year

Repeat 2=Second Year\*(1-PF2)

Repeat 3=Third Year\*(1-PF3)

Join 2=Repeat First Year\*PF1

Join3=Repeat Second Year\*PF2

Join4=Repeat Third Year\*PF3

### Auxiliaries

PF1=1-step(0.2,2018)

PF2=1-step(0.15,2018)

PF3=1-step(0.1,2018)

PF4=1-step(0.1,2018)

Revenue Per Student=5000

Total Funded Students=First Year+Second Year+Third Year+Fourth Year

Total Repeat Students=Repeat First Year+Repeat Second Year+Repeat Third Year

Total Revenue=Total Funded Students\*Revenue Per Student

Lost Revenue=Total Repeat Students\*Revenue Per Student