

# A Time-to-event Variable

A time-to-event variable is a variable that measures the length of time from some initial time until something of interest occurs. Time-to-event variables are also called survival data (in medicine), event history data (in social sciences) or failure data (in engineering). Some examples of time-to-event variables are listed below:

## Examples:

- ❖ A lecturer may record the time taken for ten students to successfully answer twenty simple maths questions. A possible dataset is given below:

<b>Student</b>	<b>Time Taken (secs)</b>
1	45
2	58
3	77
4	91
5	52
6	55
7	48
8	57
9	39
10	48

- ❖ An engineer measures the time taken for eight cars to go from 0 to 60mph.

<b>Car</b>	<b>Time Taken (secs)</b>
Ford Fiesta	13.1
Renault Clio	11.8
BMW 3-Series	11.5
Mercedes Benz A-Class	10.2
Mini Cooper	10.1
Nissan Micra	12.5
Ford Ka	15.2
Vauxhall Vectra	13.9

- ❖ A scientist measures the life span of microorganisms found in yeast.

<b>Bacteria</b>	<b>Life Span (years)</b>
1	1.8
2	2.4
3	1.9
4	3.7
5	2.6