# Subject CT4

## Corrections to 2016 study material

***Comment***

This document contains details of any errors and ambiguities in the Subject CT4 study materials for the 2016 exams that have been brought to our attention. We will incorporate these changes in the study material each year. We are always happy to receive feedback from students, particularly details concerning any errors, contradictions or unclear statements in the courses. If you have any such comments on this course please email them to CT4@bpp.com.

You may also find it useful to refer to the Subject CT4 Frequently Asked Questions thread on the Actuarial Discussion Forum. (You can reach the Forums by clicking on the "Discussion Forums" button at the top of ActEd's website, or by going to www.acted.co.uk/forums/.) This contains useful questions asked by students studying Subject CT4, with answers written by ActEd's tutors.

### Important note

This document was last updated on 17 December 2015.

## Course Notes

### Chapter 2, Page 22

In the first sentence of Section 3.4, the reference to ST3 should be a reference to ST8.

 

### *Chapter 3, Page 16*

The matrix underneath the diagram for the time-inhomogeneous Markov chain should be:

$$\boldsymbol{P[t]} = \begin{bmatrix} P_{00}[t] & P_{01}[t] & 0 \\ P_{10}[t] & 0 & P_{12}[t] \\ 0 & P_{21}[t] & P_{22}[t] \end{bmatrix}$$

to be consistent with the diagram shown.

### *Chapter 7, Page 24 (added on 17 December 2015)*

The formula immediately preceding Question 7.12 should be:

$$_tq_x = 1 - {_tp_x} = 1 - \exp(-\mu t)$$

### *Chapter 10, Page 18*

In the fourth paragraph, the estimator of $q_x$ obtained from the two-state model should be $\tilde{q}_x = 1 - \exp(-\tilde{\mu})$, not $\tilde{q}_x = 1 - \exp(\tilde{\mu})$.