

## Answer on Question #70765 – Math – Statistics and Probability

### Question

Minimum credit hours taken by an it student per semester is normal with mean of 12 credit hours and standard deviation of 3.5 credit hours. the registrar office wishes to establish a credit hours value  $c$  beyond which there will be penalty charge. what value of  $c$  is such that 99% of all students are at least 1 credit hour under the penalty charge?

### Solution

$$P(Z > z) = 0.99 \rightarrow z = -2.326 \rightarrow \frac{c-1-12}{3.5} = -2.326 \rightarrow$$
$$\rightarrow c = 12 + 1 - 2.326 * 3.5 = 4.859 \approx 5 \text{ hours.}$$

**Answer:** about 5 hours.