

**Laplace Transform Table for Final Exam - Dr. Loveless**

$f(t) = \mathcal{L}^{-1}\{F(s)\}$	$F(s) = \mathcal{L}\{f(t)\}$
1	$\frac{1}{s}$
$e^{at}$	$\frac{1}{s-a}$
$\cos(bt)$	$\frac{s}{s^2 + b^2}$
$\sin(bt)$	$\frac{b}{s^2 + b^2}$
$e^{at} \cos(bt)$	$\frac{s-a}{(s-a)^2 + b^2}$
$e^{at} \sin(bt)$	$\frac{b}{(s-a)^2 + b^2}$
$t^n$	$\frac{n!}{s^{n+1}}$
$t^n e^{at}$	$\frac{n!}{(s-a)^{n+1}}$
$u_c(t)$	$\frac{e^{-cs}}{s}$
$u_c(t)f(t-c)$	$e^{-cs}F(s)$