

INTRO

Welcome, dear families, students and friends.
Today you experience College's end.
You're all so accomplished I stand here in awe.
If I took all your classes I'd have to withdraw.

Luke Paradis chose to complete the 3-2,
And 5 double majors still want more to do.
Justin won money from the NRC,
An NSF fellowship won by Franny.

Colton's a Murray, the best of the best.
So many awards, please save some for the rest.

And to all the parents who helped make you you,
A round of applause for all you put them through.

This day happens once. In a blink it will pass.
Let's look back now to all you accomplished in class.

CLASSES

Most of you started in Phys 101,
when elliptical orbits sent you 'round the sun.
For the very same reason you're stuck to the ground.
It's gravity, yes. Now you know it's profound.

You learned E&M first in Phys 102,
When Gaussian spheres made your nightmares come true.
You learned about Maxwell, who said, "Light's a wave,
How electromagnetic fluctuations behave!"

You took 201, and it's then you discovered
The physicists' world is a world like no other.
The world very fast and the world very small
Obeys different rules than the world slow and tall.

Michelson, Morley discovered the need
to explain the ubiquity of light waves' speed.
In Einstein's world space-time united shall live.
Don't ask where or when, they are both relative.

Quantum mechanics, a wondrous world,
the world of the atom was slowly unfurled.

Gold foil bombarded with alphas galore,
some Alphas bounced back just like balls off the floor.

A wavelike description of matter explains
a remarkable fact that still boggles our brains.
An electron in motion divided can pass
through two slits and combine at the ends of their paths.

Then back to the classics in Phys 208,
Lagrangian mechanics got Newton's laws straight.
Electronics -- a painful, but practical course
Where circuits became the topic of discourse.

More Quantum Mechanics, Stat Mech, E&M.
There is nothing more interesting than them.
Of course all the while you took GER's.
History taught you of worlds near and far.

For GER6, now what were you to do?
Theater or dance? A guitar class or two?
Should you take economics for GER3?
Should you take intro bio or psychology?

You picked your own classes and followed your hearts.
It's the essence of broad-minded liberal arts.
There were no wrong choices, a lesson you've learned,
Every fork in the road opportunity earned.

RESEARCH

You've done serious research on neutrino mass.
For polarized targets you've busted your... butt.
Mode-locked diode lasers, with spectra unique,
And multiplexing at JLab for QWEAK.

Ultra-cold atoms and sheets of graphene,
The number of nights you stayed up was obscene.
Of funny new particles dreamed Lee and Wick,
AdS/QCD just made one of you sick.

And where are the grad students hiding today?
Good morning! For years you have been locked away.
I'm serious, most of you haven't been seen.
I hope that the sunlight won't turn your skin green.

LESSONS LEARNED

You have learned many lessons, some easy, some not.
The wisdom will serve you, in ways quite a lot.
You have learned how to think like a scientist thinks:
You put bias aside until error bars shrink.

When your electronics experiment died,
because the old field effect transistor fried,
What did you do? Did you just let it go?
Of course not! You fixed it. You made current flow.

When three tough exams all took place in one day,
It seemed all was lost, but it turned out okay.
And when your assignments kept you up all night,
Your hard work paid off, and it turned out alright.

Challenges mounted, your projects came due.
But wouldn't you know it, through all you came through.

THE FUTURE

Your wavefunction collapsed; your success has been measured.
It's moments like these that you'll look back and treasure.
On this day you know exactly where you stand
So you must be uncertain of where you will land.

Some of you 're off to grad schools like Berkeley,
New Hampshire and Maryland, and MIT.
Instead, if you'll join VT or UVA,
Don't fret, I forgive you. You will be okay.

And speaking of UVA and MIT,
They were founded by grads of William & Mary.
So if you turn 'round then you should be aware
You will find that the Tribe with its feathers are there.

While research continues remember your past,
so your knowledge and wisdom and friendships will last.

Now some of you're forever finished with school
Academics behind you, the real world seems cool.
One of you'll sail nuclear submarines
One of you'll be getting rich in banking.

And if you don't know where you'll be in a year,
The world is your oyster, so go without fear.
Like Jefferson, you too have learned much from Small,
Who was Jefferson's teacher when they roamed our Halls.

So I quote here a quip of Tom Jefferson's prose:
"He who knows best knows how little he knows."

WHAT WE DON'T KNOW

We don't know all our universe may contain.
We don't know what string theory might help explain.
The universe grows at rates faster and faster,
but noone knows why except gravity's master.

We don't know if Schrodinger's cat was alive
before the observer checked if it survived.
We don't understand how wavefunctions collapse.
Can it be right away or does some time elapse?

The High-Tc superconductors defy
A deep understanding of how 'lectrons fly.

There are many questions we don't understand.
But you now have the tools that such studies demand.
I propose an assignment that's long overdue.
That's right, it's no joke, I have homework for you.

Every night just before going to bed,
Find something confounding to toss in your head.
By the time that you wake you will have a new clue
To ponder the next night until it's worked through.

Never stop learning. The message is clear.
You have dedication or wouldn't be here.
It's time for adventure, so trim your own sail.
It's time to do things you're afraid of and fail.

Just keep motivated, whatever you do.
How much you'll accomplish is now up to you.

CHANGES

Many things changed since you entered these halls.
If you need any evidence, just look at Small!
A mascot unveiled, ISC now complete,
A business school castle is just down the street.

Jamestown '07, the Queen rang the bell,
Physics residing in Millington Hell.
Trader Joe's opened September '08.
Chipotle, Five Guys and ZPizza came late.

When you tread on this campus tomorrow you'll say
This is not the same campus you knew yesterday.
But today something's final, and always will be.
We're your alma mater, you our history.

Your family's grown. Like a parent I ask,
Please keep in touch, please just make it a task.

It's finally over, your diploma won.
Some final advice, and with this I'll be done.

You're charged and attractive, you hold a degree.
You're full of momentum, $p=mv$ (gamma).
In life you'll face barriers; just tunnel through.
This ends your beginning. Go start something new.