Iowa State Daily

Group projects belong outside classroom

If you've been walking across campus between Hamilton and Catt halls or along Farmhouse Lane at all the past week, you've probably noticed all that goes with constructing a new building — the chain-link fence, gravel, excavating equipment and hard hats are all tell-tale signs that work on Troxel Hall has begun.

Increasing enrollment in large lecture classes in all departments means that older lecture halls are insufficient. Larger capacities, such as Troxel Hall's seating space for 400 students, are necessary. In designing the building, practical needs were combined with commendable efforts to do our part and damage the environment less.

But among the window spaces that will account for 75 percent of daytime lighting, energy-efficient windows, reflective roof and system for purifying rainwater before it becomes groundwater, one of the Hall's selling points has been its chairs. Like the ones in LeBaron 1210, they are supposed to facilitate group activity.

When was the last time you heard from someone who enjoyed group projects? Normally, one student ends up doing everything out of a nearpsychotic need for control, or because nobody else is contributing, or the result is a mediocre project because nobody considered anything beyond their own part of the project's division of labor.

Our world's interconnectedness means that dealing with other people and being cooperative is an ordinary part of our lives. But should that fact of life mean that group activities become part of time in class?

We think not. Important teaching time is wasted by devoting parts of lectures to grouping students together, setting them to work and restoring order from the resulting chaos.

There seems to be a general attitude among students that their hands will be held through college and they'll be given everything they need to succeed, but they won't. They certainly won't once they've reached the real world.

It is up to students to take care of themselves and do their work. Devoting time in lecture to group work, just like remedial instruction when the whole class meets, is a waste of time.

If students were interested in getting all they can out of their tuition dollars, they'd demand that lectures be lectures instead of something else. Why should professors take time away from imparting knowledge to paying students?

They shouldn't. Some professors insist on holding their students as long a possible — until the clock runs out on their appointed time. We won't mention any names but, if you ask their students, those are the best professors on campus.

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Space



Photo courtesy of Flickr

Spending money on space projects such as the Hubble Space Telescope (above) and the James Webb Space Telescope is important for NASA development and space innovation. Even a partial funding of the James Webb project would cause a multi-year setback for astronomers worldwide.

Government must fund James Webb project

ears ago, astronomers dreamed up an amazing instrument that would be able to see 13 billion years into the past, just a short hop past the big bang (13.7 billion years back). It would orbit around the sun, held in place by both the sun and earth's gravity at a point where it would be tugged along behind us while remaining a discreet 1.5 million kilometers away. This observatory would be the Hubble's big brother with a 50 percent bigger mirror and a bunch of advanced features like a sun-shield and the ability to run its sensors at a frigid -388 degrees Fahrenheit.

They named this beast of a telescope the James Webb Space Telescope and after more than \$3 billion dollars has already been spent on its construction, the United States House of Representatives is fighting to cancel the whole program. Yes, that's right; they want to throw away \$3 billion dollars of work because they are too worried about tightening belts in Washington to allow NASA to make any

science-changing discoveries. I wanted to write today a follow-up to my column last week on innovation, by writing about why "big science" like that done by the Hubble space telescope is important even when you don't understand what the benefits are going to be today.

As I alluded to last week, "big science" projects - anything from the James Webb to $the\,Super\,Collider\,to\,the$ Manhattan Project — are vitally important to our country. We did not become the most technologically advanced nation in the world by accident or by mistake. Our grandfathers and great-grandfathers made some important decisions in their day to take on big bets to win the war in Europe and later to win the Cold War with the Soviet Union.



They pumped money into science and education as well as the military because they knew that it would be better to have a nimble, technologically advanced army, navy and air force than to maintain a large but primitive group of soldiers. They wrote brilliant men a blank check to develop the most cutting edge technology the world had ever seen.

While big technology and science programs had major applications in the wars of the day, they had a much bigger impact that was never planned. They sparked revolutions in the materials, technology and data fields as their brilliant designers searched for good solutions to tricky problems. In one instance, you can consider what might have happened if NASA had not needed thousands of brand new, hardly tested integrated circuits to be made for its spacecraft computers. Without NASA's effort to prove and use a cutting edge technology like this, the computer revolution might have taken years longer to come to fruition.

Now, of course all of this innovation of the '50s and '60s didn't come cheap. At the time, corporate taxes were more than 50 percent and personal taxes were well above 80 percent. But it could be argued that we are still reaping the benefits of the education and technology that was the focus of that time. Today, when our tax structure only collects half as much of our money in taxes, it only makes sense that we can do only half as much education and science work. (Unfortunately the military never quite got that memo — their cost-cutting in the 1990s was interrupted by Sept. 11, 2001.)

But I don't understand why when we spend more than \$700 billion per year on defense and still manage to lose shipments of billions in cash in Middle-East war zones, we can't spend a measly \$5 billion in the next seven years to build the most powerful space telescope ever. This is a program that is paying for highly skilled jobs all around the country and could allow us to take a look at planets orbiting distant stars. Yes, it doesn't produce massive numbers of low-paying jobs, and I'm sure NASA's lobbyists/administrators aren't as good as those employed by large corporations, but NASA isn't throwing money down a hole. It is investing in the future and in yet-unknown discoveries.

Yes, NASA made some mistakes. As noted by Dr. Pamela Gay at a recent event, one of NASA's biggest faults with James Webb was to allow astronomers to put together a budget on their own. As she noted, astronomers are good at studying stars and not so good at budgeting. Some of the ballooning cost of NASA's new space telescope was added recently when it realized nobody had added an operations budget to the overall cost of the James Webb (oops!).

In the end, we all make mistakes and NASA enough?

The Senate and House are working to resolve their different perspectives on the program. The Senate voted to fully fund the JWST in 2012 and the House voted to defund it. So while they work to reconcile the bills, I urge you to talk to your representatives and make sure they don't cut James Webb. Even a partial funding of the program for a year would cause a multi-year setback for astronomers worldwide. It's a question of whether we want to make the brilliant discoveries of tomorrow in the sky or bury our heads in the sand. You choose.

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Campus

Choose your elective classes wisely

t's about time to register for next semester and, while everyone needs electives, there's not really a good place to go for advice, especially if you want to know which classes are easier than others. As a senior graduating in December, I feel like I need to pass on my experience to all future generations before I die off, or at least graduate.

Environmental Studies 324 (Energy and the Environment) — Easy A: Yes.

This class is taught by the wonderful Dr. William Simpkins. He's an environmentalist and drives a Prius. You might even get the chance to drive it, on one of the several field trips you go on in this class. The information in this class is really important, and it's actually a really fun class. The tests are super easy if you even pay the slightest attention, and touring the ISU power plant and the ethanol plant in Nevada is easily worth taking the class.

Human Development & Family Studies 283 (Personal & Family Finance) — Easy A: Yes.

This class should be required to graduate. With financial issues being a leading cause of divorce, it just makes sense to have every



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ISU graduate have a basic understanding of everything financial. This class covers everything from banking, stocks, mutual funds and bond markets, to insurance. It's something everyone should know, so do yourself a favor and take it as an elective.

Economics 101 & 102 online (Micro and Macro Economics) -Easy A: Yes.

I suggest taking the online versions of both of these, as the website they use is pretty incredible. You can do all of your assignments (one per week) on the site, including an easy-to-use graphing tool. The assignments follow your book exactly and the test questions are basically wordfor-word from the optional review on the site. Here's the thing about the open-book format of these classes: The amount that I learned and retained from these classes has to be in the top five of all my

classes at Iowa State. I wish that all the other professors that taught online classes took notes from Dr. Lisa Gundersen, who teaches the online version of these classes Highly recommended.

Political Science 215 (American Government) - Easy

This class is another one similar to HDFS 283, it should probably be required of all students. If you go to class and pay attention, you'll do well, and the information is important. It covers everything about American government, including political parties, voting, the Constitution and important topical discussions. Dr. Steffen Schmidt is very knowledgeable and really passionate about the subject, which makes the class infinitely more enjoyable.

Religious studies class taught by Hector Avalos - Easy A: No. Saying Dr. Avalos is a knowl-

edgeable professor is an understatement. He definitely knows his stuff. As a internationally known atheist and author, he will definitely challenge your religious beliefs. If you're a Christian, don't go to one of his classes expecting the same interpretations you get from Salt Company or church.

However, if you're up for the challenge, Dr. Avalos has a lot of challenge to offer. He's also very personable and approachable.

Wild card: Art History 489 (The History of Sequential Art [comics!]) -

Easy A: No. In the College of Design, Dr. John Cunnally is known for the massive amounts of work in his classes. The problem is this ... it's all really interesting, and he's a really good teacher. I hadn't ever opened a comic book in my life before taking this class, and while the work was, at times, burdensome, it was never boring. If Dr. Cunnally is offering this class in the future, you should be taking it.

Certainly there are many interesting classes out there and the best way to find them is talking to people. Ask upperclassmen in your dorm or house for interesting classes. Don't waste your precious electives on things you're not interested in. Your regular classes are hard enough without the drain of a class you hate.

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