

Dear January Bruno,

You are about to take a class that will not feel like any science class you have taken before, and I mean that in the best way possible. Do not expect to just cram some random facts on your brain and move on. No, no, no, this course is going to ask you to actually think, and to keep thinking after the lecture ends. Mr Randy will fantastically blend light and biology to history, philosophy, art, theology, and politics in ways that sound strange at first but end up feeling completely natural. You will read about Newton and realize he was as much a theologian as he was a physicist. You will meet Gregor Mendel and understand why being right too early is its own kind of tragedy. You will find yourself genuinely curious about things you never expected to care about, like what a candle has in common with a leaf, or why the eye of a fish is more spherical than yours.

That said, be honest with yourself: the course covers a lot of ground, and the connections between topics are not always obvious until you slow down and sit with them. Do not let the breadth intimidate you. Randy is trying to show you that everything is connected and that science is a human enterprise full of doubt, courage, and revision; and not just a collection of settled answers. Come in with an open mind, be willing to question things including your own assumptions, and do not be too quick to ask what is going to be on the exam. There is, in fact, no exam at all – only a celebration of what you've learned through more creative and exciting projects. The better question, the one this course actually celebrates, is what does this mean, and why does it matter.

Best,

Bruno Abucham, on May 8th, 2026

Dear January Me,

When you take Light and Life, do not expect it to be a normal biology class where you memorize definitions and move on. You are going to end up talking about much more than just light. You will learn about evolution, genetics, vision, ultraviolet radiation, skin pigmentation, climate topics, and how light has shaped life in ways you probably never thought about before. Some of the most interesting parts will be seeing how everything connects together. Something that starts with eye color somehow turns into genetics, evolution, and human history. You will also realize that a lot of things you thought had simple answers are actually much more complicated. The class makes you think about biology in a broader way instead of just memorizing facts. You will also learn that there is never one side to the story. Through debates and other conversations, you will learn that every fact and opinion has multiple sides to the truth.

There are positives and negatives too. One positive is that many topics are genuinely interesting and sometimes surprising. You will probably leave lectures thinking about random things afterward, like how giant squid eyes work or how ultraviolet light shaped human evolution. The one negative is the 8:40 timeslot. You may feel that it will be easy to get up in the morning and go to class but once it gets cold, those early mornings in bed become even harder to get out of.

The biggest thing that you will learn from this class is that Professor Randy's words are never the whole truth, you have to find the truth by yourself!

Dear January Me,

You're going to love BIOPL 1130 more than you expect. This class feels less like a lecture and more like walking into a live science show every morning. The demonstrations are genuinely the highlight. Every class, Professor Randy somehow finds a way to make concepts feel exciting and real instead of just something on slides. You'll find yourself looking forward to class because you never really know what experiment, flame, plant, or strange phenomenon he's going to show that day. It honestly makes science feel magical again in a way that a lot of college classes don't.

That being said, the 8 AMs are rough. There will definitely be mornings where you're half asleep walking in and wishing the class were later in the day. But once class starts, the energy usually wakes you up pretty quickly. The class also makes you notice science in everyday life more, whether it's sunsets, plants leaning toward windows, colors, light, or random things around campus. Overall, this class reminded me that science can be creative, visual, and genuinely fun instead of just memorization. I'd absolutely take it again.

All the best,  
Jenny

# Letter to Self: Mahidul Islam

Dear January Me,

If you take PLSCI 1130: Light and Life, don't expect it to be a normal biology class. The class is honestly all over the place in a good way. One day you're learning about how the human eye works and why people have different eye colors in life, and the next day you're talking about ultraviolet light, bee vision, photosynthesis, circadian rhythms, and even glowing organisms. Sometimes it feels more like a mix of biology, chemistry, physics, and history all combined together. There were definitely lectures where I was confused at first because the topics could get really detailed and kind of confusing, usually with optics and some of the chemistry parts, so try not to fall behind. But a lot of the lectures are actually really interesting once you start connecting everything together and actually paying attention. The bee vision and polarized light lecture was probably one of the coolest because it made me realize animals can see things humans literally cannot.

The class also makes you notice things in everyday life that you normally would not think about, like why the sky looks blue, how light affects your sleep in ways you wouldn't even know, or how plants use sunlight to survive. Professor Wayne is super passionate about the topics, and sometimes he goes into historical stories or random examples that make the lectures more fun. The negatives are probably that there is a huge amount of information, and some lectures can feel long or packed with details. But overall, it's a cool, nice, and unique class and probably one of the more interesting science classes you could take because it connects so many different ideas together through the theme of light and life.

Best,

Mahidul

Dear Vansh,

Before you step into BioPl 1130 Light and Life, there are a few things worth knowing. This course is unlike the biology classes you have grown accustomed to. You will not be memorising Latin nomenclature or labouring through lab practicals. Instead, Professor Randy approaches the material with a genuine enthusiasm that, regrettably, is uncommon among instructors. You will be introduced to figures such as Niels Finsen and Franz Halberg, names that will be unfamiliar at first, and you will be asked to write imagined dinner conversations with them as part of the coursework. The course will also reshape the way you perceive light itself, whether it is the early morning sunlight, the fluorescent glare of Mann Library, or the disrupted sleep that follows studying late into the night.

There are, however, areas where the course could be strengthened. Some of the assigned readings are dense and at times, feel disconnected from the tone Randy strikes during lectures, which creates an unevenness between the textbook material and his storytelling approach. Additionally, the grading expectations for the creative assignments would benefit from greater clarity at the outset, as a fair amount of time was spent wondering whether the work met the intended criteria. These observations, however, do not detract from the broader value of the course. You will leave with a different understanding of science, and likely a different understanding of your own generation as well. Professor Randy introduces the concept of intellectual laziness, that students want to take the easy path and get the task done. That idea will remain with you long after the semester ends. Approach the class with seriousness, but allow yourself to enjoy it. It is better than you anticipate.

Sincerely,  
Vansh

# Letter to Self: Selina Ke

If I could tell my January self one thing before taking Light and Life, it would be to expect a class that challenges how you think, not just what you know. This isn't a typical science course where you memorize slides and repeat facts on exams. Instead, it pushes you to question what "truth" in science really means, reminding you that what you see isn't always the full story. You'll hear ideas that might sound convincing at first (even from Randy), but don't just accept them, take the time to really understand the reasoning behind them. The class leans into curiosity, uncertainty, and interpretation, which can feel uncomfortable if you're used to clear right-or-wrong answers, but that's also where most of the growth happens.

At the same time, expect a very engaging and hands-on experience. You'll be doing experiments, participating in activities, and even taking photos to connect scientific concepts to the real world, which makes the material feel more meaningful. The dinner conversations will end up being one of the most valuable parts. They give you space to think more creatively and reflect on lecture ideas at a deeper level. That said, the open-ended nature of the class can sometimes feel confusing or less structured than other STEM courses, so you'll need to stay actively engaged and be comfortable sitting with ambiguity. If you lean into that, though, you'll come away with a much richer understanding of science, not just as a body of knowledge, but as a way of thinking.

I also want to thank you Randy for such an amazing class! I took this class mainly to fulfill a biology requirement, but it ended up being one of my favorite classes I've taken at Cornell. Becoming a "Light and Lifer" was genuinely a highlight of my semester. The class stood out because it made science feel meaningful and engaging in a way that went far beyond memorizing content. It encouraged curiosity, creativity, and thinking more deeply about how we understand truth and the world around us!

# Letter to Self: Ivy Liu

Hi randy,

If I could talk to myself back in January before starting BioPl 1130 Light and Life, I'd say this: expect a class that blends biology and physics more deeply than you might initially assume. It's not really about memorizing facts about light or photosynthesis, but understanding the mechanisms behind how light interacts with biological systems. There will be moments where the material feels abstract. Especially when you see those spectroscopy diagrams and the physical principles that seem way too sciency to understand. But don't worry there will be fun and really cool things in class where you can actually see and touch to understand what the professor is saying.

I'd also tell myself that the class rewards curiosity. The most valuable parts aren't just the equations or definitions, but seeing how foundational principles of light explain real biological phenomena. At times, lectures can move quickly, and it can feel dense, so it helps to ask questions early rather than waiting. Overall, expect to be challenged in a way, but also to leave with a much deeper appreciation for how light shapes life at the molecular and ecological levels. Also, you get to have a mission to take photos for each class which can make a boring week a bit just more interesting!

Best,  
Your future self, Ivy

# Letter to Self: Maximo Mander

Honestly, going into this class you should expect a dynamic where you end up learning more about life and just general knowledge than you would in pretty much any other course at Cornell I've taken. It's not really a typical biology class — it bounces between physics, history, philosophy, art, and biology in a way that kind of catches you off guard at first, but by the end you actually start connecting things you'd never have connected on your own. My favorite part by far was going through the rare manuscript collection and getting to see what they have there in person — actually holding and looking at stuff that old hits different than reading about it in a textbook. Seeing things like the original writing of the house from *Charlotte's Web* really makes you think about how far a simple drawing can go, and honestly that was inspiring for me to pursue my own ventures. I also really liked the debates. They push you to engage with topics you aren't well versed in, and you walk out of class actually knowing something about an area you never would've explored otherwise. One thing I'd recommend: bring up topics or people in those conversations that you don't necessarily agree with. That's kind of the whole point of the class — getting comfortable in areas you aren't comfortable in, and learning to think through ideas you'd normally just dismiss. You'll get way more out of it that way.

## Letter to Self Assignment

Dear Candy,

I'm in my last semester of senior year, but I realized I forgot to take one last biology requirement for my major. I decided to scroll through the course roster and look for a class with an interesting title. I actually started off in Hollywood Biology, but honestly, I was so confused. Light and Life sounded much more interesting, so I decided to enroll instead. Walking into class during the second week of school, I had no idea what to expect. The class was at 8.40am, which, as a senior, was definitely rough. But from the very first day, I was met with such an engaging class dynamic and the sweetest professor. That day, we were learning about the anatomy of the eye and how we see light. It immediately became clear that this was not going to be a typical biology class. Everything felt hands on and interactive. I even got to dissect a cow's eye!

As the semester went on, I realized I was learning so much more than just biology. The class taught me how to observe the world more carefully, stay curious, and think about life in a different way. Every lecture became more interesting than the last, and one of my favorite parts of the course was the dinner conversation assignments. They pushed me to truly connect with the material and understand the perspectives of the scientists, philosophers, and historical figures we studied. I felt like I could genuinely step into their minds and see the world through their eyes. Another highlight of the semester was the Braver Angels debate. As an international student, I was initially nervous about discussing immigration, but the environment felt so welcoming and respectful that I became comfortable sharing my own perspectives while listening to others' experiences as well. After the debate, I felt much closer to my classmates because of how openly everyone engaged with one another. I also loved the final projects. Everyone put so much creativity and thought into their work, and I felt that each project genuinely reflected the personality and perspective of the person presenting it.

Randy was ultimately the reason I decided to stay in the class after attending the first session just to try it out. He taught me so much about science, history, curiosity, and even how to live a meaningful life. I especially appreciated the way he introduced us to important historical figures I had never learned about before, set up thoughtful experiments for us to experience in class (especially the candle experiment!), and organized a field trip to Olin Library to see the rare manuscripts, which was such an amazing experience. He always came to class prepared and made a genuine effort to get to know every student individually. You could tell how deeply he cared about us through everything he did, including the thoughtful comments he left on each of our dinner conversations. I genuinely believe the rest of the class and I showed up at 8.40am because we could see how much Randy cared and how much effort he put into making every class meaningful and engaging. This class was such a special part of my final semester and such an amazing way to end my college career. I came into the class simply trying to fulfill a biology requirement, but I left with so much more than that. I truly appreciated my time in this class, and I'm so glad I stumbled upon it. I could not recommend this class with Randy enough.

## Letter to Self

Dear Ariel of January 2026,

I am writing to you about your class called Light and Life (PLSCI 1130) under Professor Wayne.

Firstly, there is obviously a lot of content about light and life. We learn about the way light works, the way eyes work and develop, the genetics behind light and skin color, the way photosynthesis works, about dyes and pigments, optical illusions, and so much more. All of this is extremely interesting, and we also do very cool experiments during class to show these concepts, rather than just learning about them. While sometimes he does ramble a bit, most of the material itself is quite cool.

However, this class is so much more than just these topics. Really, the core of the class is about the philosophy of science, knowledge, and belief. Professor Wayne places so much emphasis on being a science “understander” rather than a science “believer.” He places science in its historical context and explains where certain concepts came from, even if they had problematic beginnings. He is a large promoter of free speech and open discussion, no matter the topic. While he has some beliefs that I disagree with, I highly respect him and his courage to hold these ideas that often are so radically different than the consensus. I much prefer his approach to that of Neal DeGrasse Tyson, who does his best to ignore the philosophy of science and just present it as objective, unbiased facts against falsehoods.

Overall, this is one of the most important classes you will take in Cornell. I hope you enjoy.

Sincerely,  
Ariel of May 2026

Karen Zheng, kz374

May 7, 2026

Professor Randy O. Wayne

Letter to my January self:

If I could tell myself one thing before taking Light and Life, it would be this: QUESTION EVERYTHING (even Professor Randy). This class will feel unlike anything you've taken at Cornell. Coming from Dyson, you're used to structured thinking, using frameworks like Porter's Five Forces or the 4Ps that guide you toward answers. But this class does the opposite. It challenges not just what you know, but how you think and whether you're even asking the right questions. From topics like the Doppler effect to conversations about scientists and truth, you'll realize that knowledge isn't fixed. It's constantly being re-examined. At times, this can feel uncomfortable, even frustrating, because there are no clear answers. But that's also what makes it meaningful.

Expect hands-on classes where Randy transforms the classroom into a space for discovery at 8:40 AM, whether it's coal ball experiments made from a makeshift hair dryer setup or looking through microscopes at polarized light micrographs of DNA. You'll also participate in debates on topics like immigration and AI, topics that at first seem unrelated to the course, but quietly touch on deeper questions about life and the search for truth. You'll write "dinner conversations" with people you've never heard of or people you will never meet, from Erwin Bünning and Weltanschauung to Abraham Lincoln and his exchange with the workers of Manchester. It sounds strange at first, like you're just talking to yourself, but the experience becomes unexpectedly reflective and forces you to think in ways you normally wouldn't. It is kind of meta, but you just have to embrace it.

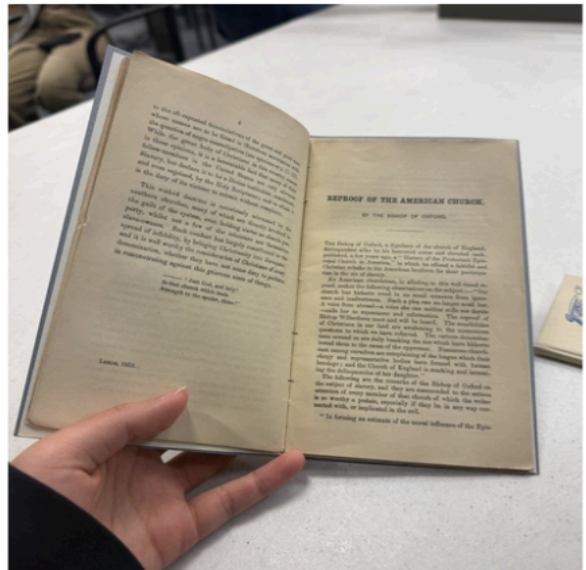
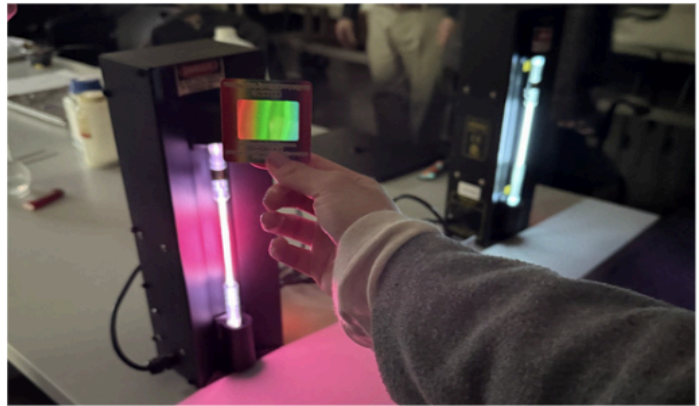
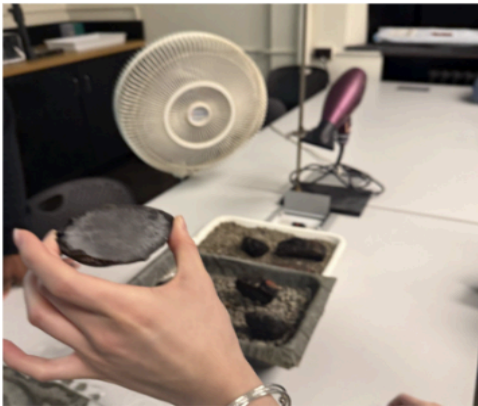
There will also be quieter moments of reflection outside the classroom that stay with you. Sitting on your bed at 9 pm, scrolling through your camera roll trying to find a photo from five years ago to match Professor Randy's assignment, you'll pass by pictures of family vacations, middle school friends, and COVID-19 memories. And suddenly you're thinking about your own life: where you've been and where you're going. As a first-generation college student, sitting in your dorm at a place you once thought was out of reach, you'll realize how much has changed. But at the same time, this class will remind you that there is still so much uncertainty ahead, and that's okay.

Light and life are so interconnected: around you, within you, and beyond you. You may not find the single truth, and maybe that is the truth. But you won't know unless you keep searching. So keep searching.

Sincerely,

Karen

**Collage of pictures from class:**



**Thank you for a great semester and class, Professor Randy!!!**