

## ***Intellectual Fusion – An Interdisciplinary Approach to Thinking, Learning and Intellectual Development***

### ***What exactly is “intellectual fusion” within the context of this course?***

What attracted you to this course? If it was the title alone, then bravo! Perhaps this course happens to be part of your core degree path (as it may be for [Bachelor of Arts in Interdisciplinary Studies](#) students). Or perhaps you just needed a lower-division elective with an SB (Social and Behavioral Sciences) general studies designation, and this course seemed like a good fit. Whatever your reasons for being here, I’m hoping that by the end of this semester, the question you are asking is, “*Why isn’t this course required for everyone attending university?*”

Indeed, the scope of this course is very broad, and the content applies to anyone looking to become a more effective thinker, learner, and collaborator – against the backdrop of an unprecedented period of rapid change and development for the human race.

The purpose of this narrative is to provide you with a brief introduction to some of the “big ideas” that will be covered in the first few modules of the course. Let’s get started!

So how might one define *intellectual fusion*? Let’s start by deconstructing the term...

in·tel·lec·tu·al

/,ɪn(t)əˈlɛk(t)ʃH(oo)əl/ 

*adjective*

1. relating to the intellect.

"children need intellectual stimulation"

*synonyms:* mental, cerebral, cognitive, psychological; rational, abstract, conceptual, theoretical, analytical, logical; academic

"her intellectual capacity"

# fu·sion

/ˈfyooZHən/ 

noun

1. the process or result of joining two or more things together to form a single entity.  
"a fusion of an idea from anthropology and an idea from psychology"  
*synonyms:* blend, blending, combination, amalgamation, joining, union, marrying, bonding, merging, melding, mingling, integration, intermixture, intermingling, synthesis; coalescence  
"the fusion of cells"

So, from those definitions, we might assume that intellectual fusion has something to do with bringing together, into a single entity, different aspects of the intellect (or different ways of thinking or knowing across various academic or intellectual traditions). Broadly speaking, that's a valid assumption. Let's see if we can gain some deeper insight by considering the idea of "*intellectual fusion*" in a more integrated sense and identifying some related concepts.

Intellectual fusion, in a very broad sense, could be described as an ideology that allows one to innovate and solve complex problems most effectively; think rationally about our thoughts, feelings, and behaviors; make important decisions across different contexts; and understand our world (and our place within in) more accurately.

The aspirations, strategies, and tactics associated with intellectual fusion involve the application of *integrative approaches to thinking and learning*, combined with some knowledge and skills associated with cognitive psychology, educational psychology, critical thinking, human relations, and team science – things that, sadly, you probably haven't learned much about in your education thus far. But that's about to change!

If you're a *Bachelor of Arts, Interdisciplinary Studies* major, it's worth noting that *integrative learning*, as used in this course, is not a synonym for *interdisciplinary learning* – although we will be delving into the theories and ideas associated with [interdisciplinarity](#) in this course, since there are some deep connections to be explored!

But for our "big picture" purposes here, *integrative learning* means developing a set of cognitive capacities—*capacities associated with*

*approaches to connecting seemingly disparate ideas, reflective judgment, and considered action.* Once mastered, these integrative learning skills will be invaluable tools for success here in college, in the contemporary workplace – and beyond.

Integrative learning, as you will see, may certainly include the various components of interdisciplinary learning, as well as an appreciation for how you might connect and integrate different aspects of your overall education and your life in general – to connect academic learning with the world beyond your role as a college student by providing you with tools that will allow you to *translate* your education to new contexts, new problems, new goals and new responsibilities. This expansive conception of integrative learning is both a pathway to intellectual fusion, and a critical skillset for thriving in the complex and rapidly changing world in which we live.

For our purposes in this course, it's helpful to break down the idea of intellectual fusion into two broad categories of thinking and learning: The interpersonal domain and the intrapersonal domain.

### ***Interpersonal Aspects of Intellectual Fusion***

In the article “*Intellectual Fusion*” (part of your Module 1 readings), you get a sense that intellectual fusion is a collaborative effort – and certainly in our attempts to grasp at solutions to nature’s greatest mysteries (and humanity’s greatest challenges), effective interdisciplinary collaboration is crucial. In the dictionary definition of “fusion” above, you can see the nature of interdisciplinary collaboration reflected there – bringing together different elements (experts in various academic disciplines, for example) in order to create something new (such as the [Large Hadron Collider](#)). This is the interpersonal domain of intellectual fusion; how people with different types of expertise can most effectively come together to create a “*whole that is greater than the sum of the individual parts.*”

Deeper into this course, we will explore some of the key aspects of effective interpersonal integration – although that’s not the central focus of the course. Which brings us to...

## ***Intrapersonal Aspects of Intellectual Fusion***

On the other hand, in the article “*How Effective Leaders Think*” (also part of your Module 1 readings), you get a sense that there might be another side to the idea of intellectual fusion; how contrasting ideas in your own mind might come together to form a new way of conceptualizing a problem or idea. This is an example of the “integrative thinking” aspect of intellectual fusion. This is very similar to [Charlie Munger’s](#) discussion of “multidisciplinary thinking” described in the article, “*Charlie Munger in Praise of Multidisciplinary Thinking*.”

As one of the greatest investment and business analysts of all time, Charlie’s perspective and ideas associated with integrative thinking and learning are beyond valuable, and much of my own inspiration for this course is drawn directly from his wisdom.

Here we enter into the [intrapersonal](#) domain of integrative thinking and learning; the mental processes (within your own mind) that you can use to conceive of, and apply, abstract notions (from across disciplinary boundaries) toward solving problems, developing innovative new ideas, and thinking more effectively, more *rationally*, about an issue.

**Note:** When I use the word “*rational*” within the context of this course, I’m referring to what is known as “*epistemic rationality*” – which basically means endeavoring to achieve an accurate representation of (and accurate beliefs about) the realities of the world. It involves seeking out conflicting perspectives, and updating beliefs based on receiving new evidence, awareness of (and mitigation of) cognitive biases, and examining why you believe what you believe.

## ***Roadblocks in the Pursuit of Intellectual Fusion***

As a college student, when you first step onto campus (either physically or virtually) you are stepping into a world of discrete academic disciplines. You choose a major. Assuming you are majoring in a traditional academic discipline, you learn how to think using the tools of that discipline. In order to meet the requirements for graduation, you’re required to take some bothersome general education courses (perhaps in the liberal arts, humanities, social sciences, or applied sciences), and these may feel more

like a “means to an end” rather than an opportunity to expand your knowledge and worldview.

The courses you are required to take don't necessarily build on one-another – sometimes even within your major, let alone across disciplines. You attend lectures, memorize discrete concepts, take tests, and promptly forget much of what you “learned” shortly after the end of the semester. Sound familiar? You're not alone!

*What's missing is an integrative thread, a way to relate the things you are learning to each other, and to your own interests, pursuits, and aspirations.*

It gets worse. The more you learn within your core field of study, the more you come to see things colored by the specific lens through which that discipline views the world. For example, nobody would argue that engineers and psychologists look at the world very differently. As do accountants, physicists, and biologists. Of course, the longer you spend in your field of choice, and the more expertise you develop, the more hardened your perspectives become. Anyone who has worked on a [cross-functional team](#) knows the challenges of putting a diverse group of experts together to collaborate on a complex project. People's egos take over and it's difficult to collaborate effectively.

On top of all that, you've already developed some deeply engrained filters through which you view the world; parental influences, cultural influences, religious and political party perspectives - to name just a few. Complicating matters further is the fact that our brains tend to work in ways (at a subconscious level) that reinforce these rigidly developed perspectives – thus reinforcing narrow patterns of thought.

Generally speaking, our educational system has not done a great job of training us to be open-minded, inquisitive, compassionate, critical and creative thinkers. The traditional educational model seems much more like a [production line](#) than it does an [integrated system](#) – you start with your freshman level courses, and work your way through in a linear fashion, checking off the requirements of your major map as you go. As you will discover, this production line mentality doesn't work well with the integrated, organic system that is your brain – and it's pretty much the opposite of integrative thinking and learning. For an interesting

perspective on this idea, especially as applied to primary education, please review this really interesting TED Talk by Ken Robinson, Changing Educational Paradigms:

[https://www.ted.com/talks/ken\\_robinson\\_changing\\_education\\_paradigms](https://www.ted.com/talks/ken_robinson_changing_education_paradigms)

In a more optimistic sense, however, there have been some tremendous advancements in our understanding of the human brain, and in the processes that lead to our ability to think, innovate, and collaborate more effectively. This is the domain of *intellectual fusion, of integrative thinking and learning*.

Let's take our first steps toward breaking down the [ideology](#) of intellectual fusion by considering the role of disciplines and the notion of integration – thus providing what I hope will serve as a guiding metaphor for your understanding of this topic.

### ***The Role of Academic Disciplines in Intellectual Fusion***

The process of integrating ideas across disciplinary perspectives is central to considering the notion of intellectual fusion. Let's take an easy example that should resonate with all college students – the idea of *organizations*. You have been involved with many different types of organizations in your life – organizations you have worked for, organizations you may belong to (religious organizations, political parties, fraternities/sororities, boy/girl scouts, etc.), volunteer organizations, and even loosely structured organizations, such as families, would work within the context of this illustration.

If our goal is to learn more about the nature of organizations, how might we begin to develop a comprehensive understanding of this topic? One approach might be to look into the insights across a number of academic disciplines to see how each conceives of the nature, or salient features, of organizations. Let's take a few to consider (this is just a sample of disciplines, of course, as well as just a sample of ideas from within each).

***History:*** How have different organizations (or one particular organization) changed over time? What can we learn from looking at that to take the best the past has to offer without repeating its mistakes? Do we

always have to reinvent the wheel? Or can we update a classic design (like when Ford re-released the Mustang and the Thunderbird some years back)? What can we learn about organizations in general from studying different periods of history and how organizations functioned then or responded to different forces?

**Political Science:** How do various political philosophies impact business or different organizations? This ties to *Public Administration* as well in terms of policy and taxes that affect individuals and organizations alike. (*Law*, as a field of study, starts to factor in here as well.) Not just the big political parties, but what can we learn from great political theorists and thinkers, or various political ideologies? Going a different direction, how do special interest groups influence organizations or become organizations? Politics itself houses many different types of organizations and there are many roles within them.

**Sociology:** How are organizations viewed as institutions? How have those institutions changed over time? How do institutions act as a force in our society and how do different groups interact with them? (For instance, which groups primarily comprise the military? Or, does prejudice or discrimination of certain types hover around certain types of institutions?) How important are various institutional features to happiness? What roles do class, race, and other demographics play in organizations in terms of the management? The employee groups? The consumers? Other interest groups?

**Psychology:** How does worker/member satisfaction affect organizational missions? What individual characteristics work well in certain groups or should be sought for certain jobs? How do people think and how does that relate to effective management techniques? What role does self-esteem, self-concept, and/or emotion play in the workplace? In management? In marketing and advertising? How do groups relate to each other? How can social psychology principles be used to help us understand conformity, social cognition, persuasion, attraction? What behaviors might help improve the workplace environment, sales, or customer loyalty? How can industrial or environmental psychology improve the workplace environment and productivity?

**Education:** How do people learn? Every organization has training aspects to it. Also, traditional education turns out future generations of

workers, consumers, and civic participants, so is education doing a good job? How do the institutions, or organizations, of education and business influence each other in the abstract (and in a more concrete sense)—in the short run and in the long run? This starts to relate back to Sociology!) And, how do we promote the idea that every organization is, ideally, a *learning organization* and should embrace an educational “what can we learn here” perspective? How can we integrate learning into the fabric of the organization so we grow and don’t slide backwards?

**Religious Studies:** Each religion, of which there are many, have their own traditions and their own sorts of organizational structures. There are also “bigger” questions about how people relate to others, the earth, and their own selves (not just a Deity) discussed in some Religious Studies classes. People you work with will often come from a variety of different religious backgrounds as well, so appreciating how different beliefs may affect their worldview and behaviors will enhance your ability to appreciate diversity in a respectful manner. Religion in general can also be a powerful political player and some religions as organizations/institutions have a long history of being influential, affecting not just individuals but other organizations as well. (Just thinking a bit about this and you can start seeing *connections* – potential intersections between this area and, say, psychology, sociology, history, political science, and so on).

**Communication:** What strategies increase the likelihood people will listen and understand our messages? What external and internal variables affect the effectiveness of a message? What theories are there about how to communicate in different settings with different people? For example, what skills do I need to be an effective negotiator? What other skills might be useful to communicate? Or in just getting along with the people I work with every day? What models are there for handling conflict? Imagine how the answers to these questions apply to various organizations and how some principles may be more “universal” and others more situation-specific.

I could go on and on about different ways that each traditional major or discipline—each with its own way of collecting data and creating knowledge, each with its own great theories and concepts—might connect to the varied world of organizations. How about the biology of organizations, for example? Or the physics of organizations? Or the mathematics of organizations? Each perspective provides a different lens

through which we can view our topic of interest. Sometimes the farther a field of study seems from your target interest (organizations, in this example), the more productive and creative insights you will find there!

For instance, here's a quote from a reviewer (Robert D. Steele) about the book, *Leadership and the New Science: Discovering Order in a Chaotic World*

“I give the author credit for carrying out an extraordinary survey of the literature on quantum mechanics, and for developing a PhD-level explanation of why old organization theory, based on the linear concepts of Newtonian physics, is bad for us, and how the new emergent organization theory, understood by too few, is less about the things and more about the relationships between and among the things.”

While physics may not be your discipline of interest (though you may have taken it for a science requirement), this book illustrates how folks are applying insights from one discipline (physics) to the consideration of topic of interest (organizations).

As we get deeper into the course, you'll come across key concepts and theories across many disciplines, and we will explore how those ideas can, in an abstract sense, provide us with new and very powerful insights into our thinking, and our ability to come up with innovative ideas. Creativity, innovation, and intellectual fusion are indeed very closely related.

In addition to getting a sense for how traditional academic disciplines can provide valuable insights into a topic of interest, I hope you also carry that idea forward into your own life. What kinds of things are you most interested in? By first connecting deeply with your core interests (investing, sports, tropical fish, travel, human interactions – whatever your interests are), and then actively seeking connections with things you are studying in college, you'll find that you can [transfer learning](#) from almost any class to apply to various things you are interested in outside of college – IF you are staying “consciously alert” about this while you are learning. *Watch for connections. Write them down, and reflect on how that changes your understanding.* Not only will this practice provide you with new and powerful insights about your interests – it will also help you remember the ideas (from the field from which you are borrowing) much more effectively. *Thinking in this manner is what separates brilliant thinkers from average ones!*

For example, let's imagine you are taking an economics course, and you're learning about [price elasticity of demand](#). You're also unhappy with your romantic life. You might try to apply price elasticity of demand (in an abstract sense) to your recent lack of success in attracting a romantic partner – imagining that “demand” for dating you is low because there must be some high “price” potential partners perceive would need to be paid (perhaps due to awkward dating skills, or geographic undesirability, or having only very limited time available to date). This connection (or fusion of ideas from two very different domains) may not only yield some deep insights and strategies for how to get your dating life back on track, but also cement the concept of price elasticity of demand into your brain, thus helping you pass the dreaded Econ final exam! Or perhaps you are learning about [inversion](#) in an advanced mathematics course. You're sensing a connection and possible application of inversion to your dating problem, and you decide to “invert” your problem and ask, “How can I ensure that I never attract a suitable romantic partner?” (In this case, we can think of inversion as a useful “mental model” that has applicability across many different kinds of problems – and we'll dive deeply into this idea later in the course.) By flipping the question around, you're likely to uncover additional reasons for your lack of romantic success – and some kernels of wisdom that may help you turn the situation around!

Now **that** is integrative thinking and learning (and intellectual fusion) in action!

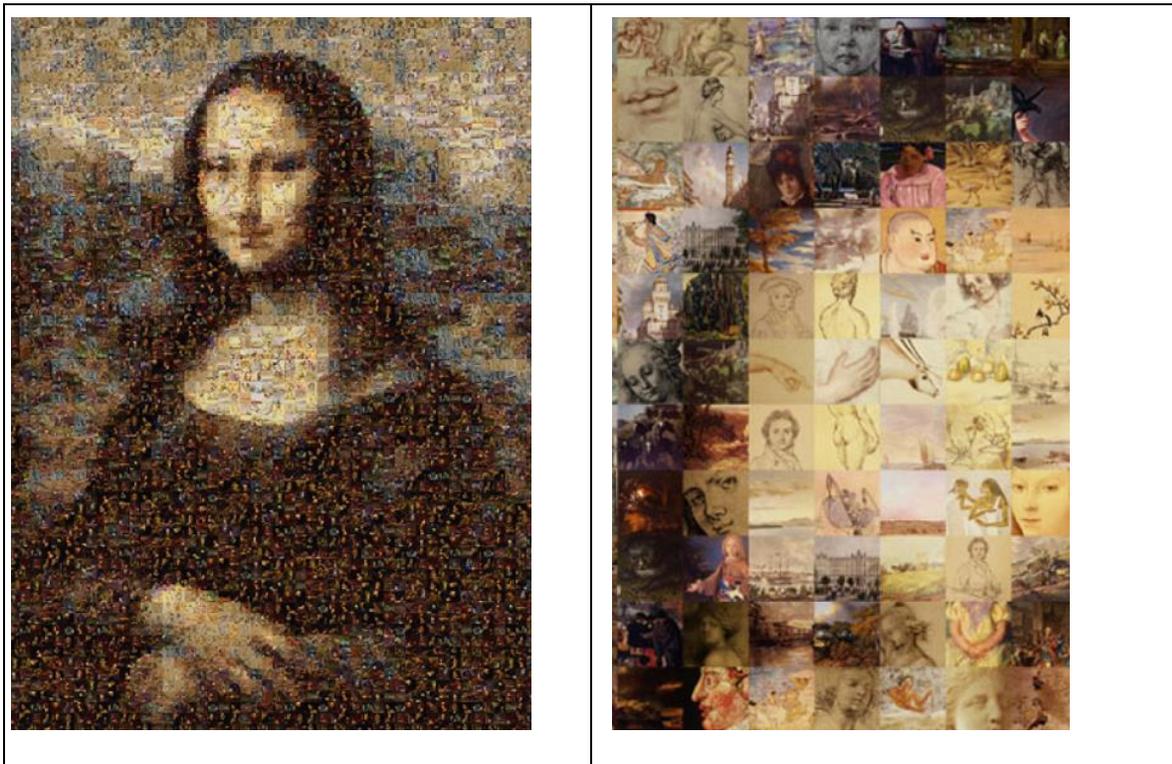
### ***An Introductory Analogy***

*“There are very few human beings who receive the truth, complete and staggering, by instant illumination. Most of them acquire it fragment by fragment on a small scale, by successive developments, cellularly, like a laborious mosaic.” — Anais Nin*

As you may have already noticed, we'll be using a lot of analogies in the course. I'd like to offer you an introductory analogy here to summarize what we have been exploring thus far in this narrative. I'm [hoping how you perceive knowledge and knowledge acquisition moves from a “patchwork” of acquired knowledge and skills to a full “mosaic” that stitches together not](#)

only what you have learned in an organized fashion, but also represents your vision for your future. Your very being, or sense of “self” is, in reality, composed of many different beliefs, ideas, experiences, skills, perspectives, and areas of knowledge – already a mosaic of sorts, with your academic history and learning comprising one dimension.

Consider this photo-mosaic (made by [Robert Silvers](#)) where the picture of the Mona Lisa on the left is really composed of many little pictures. The picture on the right is a detailed look at what’s in one tiny piece of the complete picture – if you were to look really closely!



Pretty cool, huh? You can check out his website for many other examples of cool mosaic pictures, but the point here is that your learning (and your life) is a mosaic of pieces from which you can construct an over-arching “vision” that can be projected.

To put it in perspective with respect to your formal education, each of the classes you have taken throughout your time in college are just a small “pictures” in the larger picture of your college education and your intellectual development. And, of course, your college education is one small picture of who you are and what you offer the world. The skills you

will build that are associated with *intellectual fusion* will hopefully take the mosaic idea even one step further – from a mosaic to a full high definition image. Throughout this *BIS 201 Intellectual Fusion* experience, I hope to help you begin to construct that high definition image! I'm excited to be your guide as you accumulate to tools that will bring your learning and your life into 4K ultra high definition quality!

