

Universal Interdisciplinarity:
A Handbook for Academia and Beyond

By Sarah Hentges



Dedicated to students who make their paths through thick and thin, who emerge with scratches and scars ... and a commitment to something bigger than themselves.

and

To T.V. Reed, whose work in American Studies oriented me on my path and toward a whole new universe.

“‘Stopping by Woods on a Snowy Evening’ ... is one of my favorites of all the Hundred Poems, the ones our Society chose to keep, back when they decided our culture was too cluttered. They created commissions to choose the hundred best of everything. ... The rest was eliminated. Gone Forever. *For the best*, the Society said, and everyone believed because it made sense. *How can we appreciate anything fully when overwhelmed with too much?* ... (29)

“The government has computers that can do sorts much faster than we can, of course, but we’re still important. You never know when technology might fail.

“That’s what happened to the society before ours. Everyone had technology, too much of it, and the consequences were disastrous. Now we have the basic technology we need... and our information intake is much more specific. ... Such specialization keeps people from becoming overwhelmed. We don’t need to understand *everything*. And, as the Society reminds us, there’s a difference between knowledge and technology. Knowledge doesn’t fail us” (32).

—Ally Condie, *Matched*,
a young adult dystopia novel/trilogy

A note to students and readers...

The sheer amount of information that we process on a daily basis—let alone over our lifetimes—can be overwhelming. But we don't need a Society to sort and choose the “best” of everything. We don't need to sacrifice diversity for specialization. We can make sense of this universe through the prism of interdisciplinarity.

There are a ton of books that offer an introduction to interdisciplinary studies. One of the best is Allen Repko's *Introduction to Interdisciplinary Studies*, which draws on over a decade of research and conversation about interdisciplinarity. I use Repko's book in the Interdisciplinary Studies courses that I teach. It is an indispensable resource for interdisciplinary students.*

This book is something different.

My book is a little book. It is an inexpensive book. It is meant as more of a guidebook for students who want to study between and among disciplines, consider knowledge as interconnected, and understand the world around us in all its complexities. It offers a way to think about your education as something that you can shape to your interests—not a rigid box that you have to fit into.

While this book can be directly applied to the Interdisciplinary Studies major at the University of Maine at Augusta**, it might also fit with other programs or can also be used by any student (or prospective college student) to explore their academic interests or help them decide between a traditional major and an interdisciplinary major. It can be used in part or chunks; it can be considered and reconsidered as your interdisciplinary journey unfolds.

Interdisciplinary studies is not in conflict with disciplinary studies; there is a symbiosis. Interdisciplinarity can also enhance disciplinary work in a variety of ways—providing a different take, for example, or enhancing/creating connective tissues. Thus, this book also includes tools and skills that apply to a university education more generally, to an understanding of the institution of academia.

I highly recommend that students read a plethora of other books—that’s kind of a requirement of being interdisciplinary. (Some resources are included at the end of this handbook for further reading.)

You’ll want to read about interdisciplinary studies, but you’ll also want to read books that practice interdisciplinary studies—as well as those that are more disciplinary. More and more, any book/study has to position itself not only in its own discipline, but also in relation to other disciplines and to the larger, “cluttered” world.

Interdisciplinarity reflects the complex nature of our overwhelming world. “We don’t need to understand *everything*.” We just need the knowledge and tools to sort for ourselves in meaningful ways.

This book wants you to be ready for a whole universe of complex worlds so that our “knowledge doesn’t fail us.”

~

*You can learn more about me in the “About the Author: Toward a Context for This Book” section on page 56.***

**The Interdisciplinary Major is available on both the Augusta and Bangor campuses, as well as online.

***As you can see here, notes are designated by an asterisk and can be found at the end of each section.

Contents

A note to students and readers.....	1
Part I: Introductions: Theory and Practice.....	5
“Universal” is Interdisciplinary: An Introduction.....	6
What is interdisciplinary studies?.....	8
Am I an interdisciplinary student?.....	10
What can I “do” with interdisciplinary studies?.....	13
Part II: Interdisciplinary Studies: Academia and Beyond.....	14
Community, Reality, and Imagination.....	15
Humanities, Cultural Studies, and Interdisciplinarity.....	18
A Case for Social Justice.....	21
Where We Meet Science.....	23
Part III: Building a Program.....	26
Process/Development.....	27
Context and Vision.....	36
Part IV: Tools.....	38
College Writing as Interdisciplinary Studies.....	39
Diversity and Critical Consciousness.....	45
Self-Care for the Mind and Body.....	47

An Endnote for Students and Readers.....52
About the Author: Toward a Context for This Book.....53
Works Cited.....55
Other Interdisciplinary Resources.....57
Acknowledgements.....62

Part I: Introductions: Theory and Practice

Interdisciplinarity is a complicated and contested idea, definition, and practice, but it is also the reality of knowledge and the development of increasingly interdisciplinary programs that meet the demands of our complex world.

There are many ways to introduce interdisciplinarity.*

~

*My students tell me that they rarely read introductions. The introductions—as well as the prefatory materials at the front of books and the resources and appendices at the back of books—can tell you much about what’s inside a book... and can give you an idea of the book’s main ideas more quickly. Intros can also help you get more out of a book. So, always read the intro and flip through all the parts of the book!**

**There’s a lot of extra blank space in this book. It’s your handbook, so you should feel free to write in it.

“Universal” is Interdisciplinary: An Introduction

We live in an interdisciplinary world. Interdisciplinarity is not stagnant. It is changing. It may very well be that in another 30 years new disciplinary structures have arisen; or perhaps there will be none at all. *Universal Interdisciplinarity: A Handbook for Academia and Beyond* does not try to predict the future; it aims to provide ways to ride the wave of knowledge generally and navigate the structures of academia more specifically.

Thus, the “universal interdisciplinarity” here is science fiction, not simply an assumed applicability across all contexts.* It represents the big picture of the universe—one that encompasses all kinds of ideas and practices. I want students to think about the bigger picture of their education—and the larger structure of education that they are shaped by. I want to empower students to shape their own educations.

I was an interdisciplinary studies student and I advise students who are creating their own majors, combining classes from a variety of programs to shape something new. I am working to make a path for this process, a path that anyone can follow. I had no defined path when I began. I stumbled around, bumped against barriers and skirted sharp edges. Learning is a messy, sometimes painful process, but it is also a process of growing. It doesn't start with being a student, and it doesn't stop with graduation.

This book, I hope, points the way to and through education and toward building something enduring for each student. It aims to meet you where you are. It takes you where you want to go, or where you need to go. It offers tools for academia and beyond.

I am still learning about the ways that academia works. As a student I had no idea what academia was all about. I just wanted to learn. Until I was enrolled in a PhD program, I had not really considered that I might be a professor. I didn't think of this as a job. I want students to know more about academia so that they can help to shape the structure for themselves and future students.

“Universal interdisciplinarity” also resonates with a larger responsibility to our communities—on and off campus. Our communities are looping and overlapping and our campus (physical or virtual or embodied) should serve the needs of our students in many aspects of their lives. Additionally, we should be serving the members of our communities that do not have the privilege to attend an institution of higher education.

This book asks us to imagine that “beyond” academia there are possibilities that are also interdisciplinary in nature. The universe is all kinds of interdisciplinary. And interdisciplinarity is universal because it is everywhere.

~

*There are certainly contexts where the “universal” does not fit and where this idea has been used to erase ideas and cultures, if not also lives. However, the basic idea of interdisciplinarity—an integration of perspectives and practices to fit the needs of a particular context—means that generally, interdisciplinarity is universal. And it changes.

What is interdisciplinary studies?

You will be asked this question a lot. The answer might scare people. You might find resistance among family, friends, even among some of your professors. This book helps to prepare you to be able to answer this question. But, more importantly, this book gives you a foundation and tools for understanding what you study, how you study it, and why you study it.

While there are different and conflicting definitions, understandings, and practices of **interdisciplinarity, at its base is the idea of thinking, researching, and writing between and among disciplines.**

Repko and many other authors offer short and long definitions of interdisciplinarity. One simple definition that Repko offers (and I extend here) is a metaphor: interdisciplinarity is a smoothie, while multidisciplinary studies is a bowl of fruit. Both are healthy choices. Liberal arts and general education bring together a variety of disciplines within a student's education, but they are individually distinguishable as a particular kind of fruit. Each is contained (but some are grown as hybrids!). Students can choose from different fruits available in the bowl or even cut up the fruit to make a salad, but the fruits stay distinctive even as they are combined.

Interdisciplinarity, on the other hand, blends together a variety of fruits to make a new source of nourishment. The smoothie can be made with a lot of different fruits, but too many fruits might be overwhelming and the end product muddled. The fruit is blended with a base—juice, soy milk, coconut water, yogurt—that binds the parts into the whole. Smoothies can be combined in creative and innovative ways, incorporating fruits and vegetables and even supplements or boosters. Some have deliberate flavor profiles while others are made from whatever fruit is available.

In short, interdisciplinarity crosses traditional disciplinary lines (like English, Biology, Music, Sociology...), working between and among them to apply multiple perspectives and develop new syntheses for a deeper understanding of a topic, issue, or problem.

Allen Repko notes, there is “growing recognition that [interdisciplinarity] is needed to answer complex questions, solve complex problems, and gain coherent understanding of complex issues that are increasingly beyond the ability of any single discipline...” (3). Many other agree.

Interdisciplinary programs, thus, combine disciplinary and interdisciplinary classes to create a course of study that is different from other degree programs. Some programs are well-established at a variety of institutions and are formed with a focal point like environmental studies or American culture or women.

And some students create a personal, individual program, which is what part III of this book aims to help students develop.

This is, of course, interdisciplinarity as defined as an academic pursuit. In the world outside of academia, interdisciplinarity is a pragmatic practice. In order to survive, let alone thrive, we need a variety of tools and knowledge and skills. We have to work together to keep the tide from rising—to shape the world in ways that will increase justice and peace.

The world of academia, of course, is connected to the world outside, which is the universe of interdisciplinarity.

Students/readers can find my short intro video on YouTube:
<https://www.youtube.com/watch?v=HSXyZepNqNo>

Am I an interdisciplinary student?

“Rather than view knowledge as certain and held by authorities, interdisciplinary students—in order to reconcile and synthesize the differing disciplinary and nondisciplinary worldviews—must believe that knowledge is relative to a context and acquired through inquiry” (xiv).

—Carolyn Haynes, *Innovations in Interdisciplinary Teaching*

Every student is an interdisciplinary student. Most degree programs require students to have general education or at least offer a mix of approaches. This multidisciplinary approach to education sometimes offers interdisciplinary opportunities. Multidisciplinary students can make interdisciplinary connections more consciously with the tools in this handbook.

The real question here is whether you want to be an interdisciplinary studies major, in a program that has either been designed to cross disciplinary boundaries or a program that you design that combines and crosses disciplines. In both types of programs, integration is key. Students learn to make connections, to weigh evidence, to apply theories, to recognize patterns, to distill important points, to synthesize knowledge, and to see the bigger picture(s).

The chart on the next page summarizes the similarities and differences between generalized programs like Liberal Studies, discipline-specific majors, and an interdisciplinary major. While this chart is specific to UMA’s programs, it has wider applications.*

INT MAJOR	LIBERAL STUDIES MAJOR	DISCIPLINARY MAJOR
Explores several disciplinary and/or interdisciplinary approaches and perspectives with a focus on finding connections.	Explores multiple disciplinary and interdisciplinary approaches and perspectives.	Explores a singular disciplinary perspective and approach.
A layered, interconnected knowledge.	A broad base of knowledge.	A specific and focused knowledge.
A self-designed program created in collaboration with faculty; students can name and shape their course of study.	A loose framework of curriculum that allows for flexibility and a generalized knowledge.	An established curriculum that meets the standards and expectations of a particular field or discipline.
Provides students with a focused, directed knowledge and a set of skills that can provide a particular career option or a general set of skills applicable to a variety of opportunities.	Provides students with a diverse set of knowledge and skills that provide a variety of possible job opportunities.	Provides students with a specialized knowledge and a defined set of career and job objectives.

The building blocks of education are similar, but the arrangement of these blocks is more flexible than we are taught to think. While early education is more interdisciplinary, public schools in the U.S. quickly compartmentalize subjects—then they measure and evaluate based upon standardized expectations.

Some opportunities for interdisciplinarity are offered at every level of education, particularly in more privileged or experimental spaces. At liberal arts universities, undergraduate and graduate education practices are regulated by standards that may be more adaptable than secondary education.

These rigid structures meet their purpose (socialization, normalization, social control). But what if the purpose of education isn't as simple as a cookie-cutter?

Our world is complex and messy. What if we want our cookies to have more texture, more flavor, and less uniformity?***

~

*This chart does not take into account interdisciplinary programs that are not self-designed. Generally, this criteria fits except instead of self-designed, these programs are created by interdisciplinary scholars who shape an interdisciplinary field within an institutional structure.

**Disciplinary majors can include service-related fields like Nursing, Mental Health and Human Services, or Vet Tech, for instance. These programs prepare students according to standards set by national or state accreditation bodies. However, such programs may have interdisciplinary aspects.

***If you haven't figured it out already, Interdisciplinary scholars love food metaphors.

What can I “do” with interdisciplinary studies?

This is a question that people ask of many majors, including Interdisciplinary Studies. It is a question that devalues the process of education and bypasses the less tangible benefits, but also provides a necessary reality check. Very few can afford education for the sake of education—or, formal education for the sake of developing knowledge—but the value of education is far greater than the price of a diploma.

We might argue that many of the problems with education today can be directly linked to the rigid disciplinary organization and bureaucratic structures of education. Technology changes. Jobs change. Needs change. Identities change. Culture changes. Families change. The environment changes. Everything changes. Education tries to keep up.

One thing you can do with an interdisciplinary education is prepare yourself with skills and knowledge that demonstrate flexibility, critical thinking and writing skills, and the ability to integrate ideas and address complex problems. Interdisciplinarity might also orient you toward an understanding of the bigger picture and the ability to make connections with ideas and people of diverse experiences.

As an interdisciplinary major you can “do” anything any other major can do, depending upon what your program includes. Teacher. Writer. Organizer. Manager. Artist. Scientist. Therapist. Advocate. Law school, medical school, graduate school.

What you do is create a program that fits with where you are and where you want to go and, when relevant, where you’ve been.

Interdisciplinarity is an asset in a changing universe.

Part II: Interdisciplinary Studies: Academia and Beyond

Part II provides some food for thought as it considers some of the bigger ideas that shape interdisciplinary ideas and programs. Some understanding of what differentiates disciplines helps us to see the interconnections that make interdisciplinarity so powerful.*

The ideas here apply across, between, and among interdisciplinary studies, but they are also ideas that students/readers might meditate on through—and throughout—their studies. The relevance of interdisciplinarity, to what we learn and how we learn through academic structures, is integral to life and to our communities.

~

*See page 52 for insights into my humanities bias and the “sticky stuff” we find in literature, art, culture, and music.

Community, Reality, and Imagination

“The realities of our time, the difficult and sometimes ominous realities facing our communities, our nation, and our world are too real to deny. We ought not turn away from them, and higher education seems like a reasonable place to ground our efforts to contend with them. But part of learning to contend with the pressures of reality is finding freedom from reality, developing the imaginative space necessary for creative resistance to reality. ... just as too little reality can deplete the imagination, so can too much. A student who has not practiced resisting the pressure of reality, who has not been encouraged to work with impractical, abstract ideas in an Ivory Tower, is likely to be incapable of responding with genuine creativity and spontaneity to the problems and concerns of people around her. Such a person may be committed to serving the community, but she is likely to have difficulty generating truly innovative ideas, for the pressures of reality, convention, and popular bias will have come to weigh too heavily on her mind.”

—Matthew H. Bowker, “Defending the Ivory Tower: Toward Critical Community Engagement,”
Thought & Action

In my *Girls on Fire: Gender, Culture, and Justice in YA Dystopia* class I excerpt part of this quotation and ask students to think about how they are “developing the imaginative space necessary for creative resistance to reality” through their work on their final paper, and how YA dystopia provides this imaginative space. This kind of imagination is easy in dystopian contexts, but all interdisciplinary studies can use more room for imagination, more attention to “creative resistance to reality,” and more community connection and service.

There are so many important interdisciplinary ideas at work here. Ultimately, “reality” is what we are studying and shaping. Being able to “[respond] with genuine creativity and spontaneity” is a key aspect of interdisciplinarity and to be able to do so in response “to the problems and concerns of people around [us]” makes an important connection between academia and “the ivory tower.” All ivory towers are academic structures but not all academic structures are ivory towers.

In fact, many sources cite the growing divide in academia between elite institutions and state schools and community colleges. This growing divide mirrors the inequality of wealth distribution in our society that creates the 1% and the 99%. The resources and opportunities for students and graduates at elite institutions—as well as the professors (and some staff)—perpetuates this growing divide. While the rates of Americans with some college education are increasing, nearly 60% of Americans from age 25 to 64 have less than a two-year college degree.

Education is a privilege; how we choose to use our education is important. An interdisciplinary education can be used toward transforming those “ominous realities.” In literature, and humanities more generally, imagination is a norm. But imagination works in important ways like empathy in social sciences and innovation in science and engineering. Interdisciplinary studies extends and transforms the ways in which our imaginations can serve our communities and positively impact our realities.

This creative aspect of a liberal arts education is frequently under fire. National conversations around job skills and the need for STEM (science, technology, engineering, and math) assume that education for the sake of education is a waste of our time—as individuals and as a society. In a conversation about our interdisciplinary colloquium theme, one of my colleagues, Lester French, (a math professor with an interdisciplinary science and engineering degree) wrote about his “pet peeve”: “the focus on

learning skills [exclusively], rather than learning for the pure joy of learning.”*

He continues: “If students don't explore these odd connections between disciplines, then they will be stuck in the same, old, tired way of thinking, rather than approaching a problem in a different and possibly unique way. A skill or trade is best taught in the field. The ability to learn, reason, and understand, in different ways creates opportunities for students to apply their talents in many more fields than what their major may indicate.”

This function of interdisciplinary education is important to our communities and the realities that shape our lives. Not all “skills” are job-specific; interdisciplinary skills are flexible.

~

*This is a pet peeve I share, and one that I teach about through the work of bell hooks (*bell hooks: Cultural Criticism and Transformation*) and Mike Rose (*Back to School: Why Everyone Deserves a Second Chance at Education*), for instance.

Humanities, Cultural Studies, and Interdisciplinarity

“The Humanities imagine, create, and interrogate....”

—Allen F. Repko, “Interdisciplinary Research: Process and Theory”

“While cultural studies scholars study many things, they share a commitment to interdisciplinarity, contextualization, and social and political engagement.”

—Master’s in English, Cultural Studies Track
Program Description, Kansas State
University

“And, over the course of the twentieth century, [Humanities] took on new meanings as disciplinary practices changed, new interdisciplinary fields arose, and the boundaries of humanities and social sciences were crossed” (2).

—Julie Thompson Klein, *Humanities, Culture, and Interdisciplinarity: The Changing American Academy*

Humanities, Cultural Studies, and Interdisciplinarity offer ways of teaching and learning that connect knowledge and experience, theory and practice, student and teacher, individual and community. If we try to separate the strands of Humanities, Cultural Studies, and Interdisciplinarity, we find that some of the

pieces are always together, and that new strands form before they can be untangled.

Humanities is many different things at once and brings together similar fields like Literature (English), History, Philosophy, Art, and Music. “The Humanities” have a specific history, rooted in the works of ancient cultures, and an evolving canon of texts that recognizes the historical and contemporary, traditional and innovative.

While Humanities is often a buzzword and concept used to preserve traditional ideas, Cultural Studies questions tradition and argues for the importance of all voices, all texts, especially those of the oppressed and marginalized. The qualities that unite Humanities—in method and subject—make interdisciplinary movement among them more fluid; they are textual and open for interpretation. Cultural Studies integrates social sciences (like economics, sociology, political science, and psychology) and, thus, crosses disciplinary lines more than the “narrow” interdisciplinarity among the Humanities.

Cultural Studies is both wider and narrower than Humanities. Cultural studies is a shared commitment to critical analysis and political engagement. It is practiced within disciplinary boundaries and between and among them. As Klein describes, “Cultural studies is a general form of the bottom-up model” (59). Cultural studies takes the Humanities outside of their narrow box—it expands and explodes the object to “culture” and “texts” of all kinds. It pushes Humanities to engage us personally and politically. Cultural studies is “critical humanities.”

“The newer interdisciplinary ‘critical humanities,’” Repko argues, quoting Davidson and Goldberg, “‘focuses not so much on human culture itself as on our *knowledge of it, and on disciplinary knowledge in general*’” (72; Repko’s italics). Cultural Studies challenges what we know and how we know it.

Those who practice Cultural Studies are mocked by dissenters as: people who “wrongly assume they can change the social order through revised canons of content and interpretation” (Miller citing Rorty 1994). But the belief in the formative and transformative power and potential of culture is well-rooted in, and across, disciplines such as English, History, Sociology, Psychology and interdisciplinary fields such as Black Studies, American Studies, and Women’s, Gender, and Sexuality Studies.

Miller describes Cultural Studies as a “tendency across disciplines rather than a discipline itself” (108). (This is multidisciplinary if across, and interdisciplinary if integrative.) As Miller explains,

Cultural studies must be animated by subjectivity and power—how human subjects are formed and experience cultural and social space. It takes its agenda and mode of analysis from economics, politics, media and communication studies, sociology, literature, education, the law, science and technology studies, environmentalism, anthropology, and history. The focus is gender, race, class, and sexuality in everyday life, under the sign of a commitment to progressive social change. (108)

Cultural Studies, thus, combines a variety of interdisciplinary “modes of analysis” that expand English and Humanities, consciously intersects with gender, race, class, and sexuality, and politicizes the work of research, teaching, and learning. What distinguishes Cultural Studies from other fields is self-consciousness, positioning, and transparency. But Cultural Studies lends itself to all kinds of interdisciplinary connections.

A Case for Social Justice

“We are no longer naïve concerning the arena in which social problems exist—they exist entangled with every aspect of society. . . . Interdisciplinary studies may provide the means to finding creative and alternative solutions to contemporary world problems, especially where social-political issues are entangled in the material remedies. This can only be achieved if a dialog of social justice engages both the physical sciences and the liberal arts. . . . These overlapping worlds have been treated as distinct for far too long. Bringing seemingly disparate fields together through novel approaches may give new insights into the entangled worlds in which we live, giving social justice a chance to surface and spread” (xxi).

—R.P. Clair, *Zombie Seed and the Butterfly Blues:
A Case for Social Justice*

The interdisciplinary cultural studies infiltration into humanities (literature, art, music, etc.) illuminates the importance of social justice. While not all interdisciplinary programs or models incorporate ideas of social justice, this concept is tightly tied to some ideas and origins of interdisciplinarity. The need for solutions to human problems has driven interdisciplinary endeavors, especially in the social sciences and sciences.

Interdisciplinarity works to make ideas relevant to our social world. Social science provides a variety of disciplinary perspectives that can be helpful toward considerations of social justice and foundational to interdisciplinary studies. Sociology, psychology, political science, and economics often cross within the social sciences, and also apply outside of these related disciplines.

Social justice is also key to the continued relevance of interdisciplinary studies and its growth in the future. R.P. Clair makes these points in her introduction and then goes on to explore interdisciplinarity and social justice in a narrative form—a story/a novel/a piece of fiction. Narratives (or stories, or texts) come in many forms like art, music, film, and movement.

As Anderson and Blayer, argue, “Narratives breathe life into culture even as they draw sustenance from it, a flexible, frequently contested relationship” (3). The power of fiction is central to a variety of interdisciplinary studies, particularly in critical humanities areas like cultural studies. But science can be more difficult to integrate.

Not only do students and professors in the Humanities tend to fear and avoid math and science, the approaches and worldviews in the sciences are often opposite from those in the Humanities. But R.P. Clair argues, “Science is meant to touch and improve our lives, not alienate us from ourselves. Social problems cannot be so easily segregated these days” (xx).

“Social problems” are at the heart of the social sciences. Quantitative approaches provide measurements like the sciences while qualitative practices provide insights and analysis based (essentially) in storytelling, like the humanities. Social science provides powerful tools toward interdisciplinarity.

When Humanities, Social Science, and Science integrate (and when they partner with professional studies and an idea of service), social justice is closer than we might (fail to) imagine.

Where We Meet Science

“Interdisciplinary team science has emerged as the defining feature of the scientific endeavor in the twenty-first century. Moving beyond the lip service and fashion, scholars, scientists, practitioners, and funders recognize that scientists working largely alone in their labs and within a unidisciplinary framework are no longer best equipped to address the complex problems facing global society, whether they arise from climate change, social change, or challenges to human health” (ix).

—Frank Kessel, Patricia L. Rosenfield, Norman B. Anderson, eds. *Interdisciplinary Research: Case Studies from Health and Social Science*

Interdisciplinarity is ripe within the sciences. The “narrow” interdisciplinarity found in the sciences produces biochemistry and neuroscience, among many other combinations. With the growing complexity of our understanding of, for instance, the insanely complex human body, collaboration between the sciences makes sense.

Many of the interdisciplinary endeavors in the sciences are collaborative, assembling a team of researchers to address a particular problem or subject, like specific or general health concerns or environmental issues. As Kessel, et al. argue, “a range of new interdisciplinary fields has formed in recent decades” and “interfaces among biological, behavioral, social, and health sciences have been perhaps the most fertile ground” for “a disproportionate number of major scientific discoveries and innovations [that] involve crossing boundaries of established disciplines” (xxi). Scientists cross disciplines because they have to.

Scientists also collaborate with social scientists, bringing a more human connection to the insights of science. Social science can provide insights into scientific studies that are social and cultural. Social science can also bridge the gap between science and people.

As John W. Rowe argues in the introduction to *Interdisciplinary Research*, interdisciplinarity is “vital for the well-being of science and society... whether in the form of scientific research and scholarly inquiry or interventions and policy aimed at improving individual health and social well-being” (446). Individual health as well as the well-being of society are more complex than science can measure and evaluate.

Social science is one bridge, but other approaches and forms—like those in the Humanities—can make interdisciplinary inquiry even richer and more connected to communities and individuals’ lives. Humanities give life texture and meaning, texts toward self-discovery and cross-cultural connections, and a factor that is difficult to measure and often dismissed—happiness.

Scientific language, relationships, and advances can be difficult for non-scientists to fully understand or accept; this makes collaboration between science and the humanities a challenge. As Craig Calhoun and Cora Marrett explain in their foreward, “Successful collaboration is not simply a matter of appropriation but requires mutual transformation. This is the difference between simply transporting a technique from one field to another, or citing research across disciplinary boundaries, and actually forging integrative interdisciplinary research projects” (xxii). “Integrative interdisciplinary research projects” take work and communication.

Such integrative collaboration is difficult between fields where techniques, language, and process can be very different. As Aletha C. Huston notes in “A Path to Interdisciplinary Scholarship”: “truly interdisciplinary scholarship requires participants to learn how to think in the lexicon of other disciplines, at least to some

degree” (266).* As a result, in many interdisciplinary endeavors, sciences are often segregated from the Humanities.

This segregation ignores the important connections between science and the humanities and limits interdisciplinary understanding. One connection is stories. As Anderson and Blayer argue, “Stories are sticky. They adhere to many surfaces, such as when you cannot get one out of your head but more fundamentally they bond all manner of things” (1). Stories, as R.P. Clair argues and illustrates, also link to social justice. Adhesion, integration, application, transformation—stories are bigger than just words on a page (or a screen).

Interdisciplinary students, professors, and researchers have a responsibility to reach across the divide between the sciences and the humanities. How we do that is the challenge. But, what better than interdisciplinarity to address the issue?

~

* Carolyn Haynes argues, in *Innovations in Interdisciplinary Teaching*, that “The task of the interdisciplinary investigator, then, is to invent a new discourse that critically combines key elements of several disciplinary discourses and that is in keeping with his or her own sense of self” (xv). The interdisciplinary investigator shapes language and integration.

Part III: Building a Program

In many disciplinary programs, a variety of related disciplinary and interdisciplinary classes are offered, but the tools for making connections between and among these courses may not exist. The interdisciplinary student has to learn how to make connections, how to find sources, how to integrate and extrapolate. Individual courses will offer some tools and insights, but combining tools and insights across programs is what Interdisciplinary Studies is all about.

Part III provides the specific roadmap used to guide UMA's Interdisciplinary (INT) majors through the process. This process is part paperwork and part development/reflection. The paperwork establishes the institutional structure for the major and helps to establish a foundation for each student's interdisciplinary work.

The development/reflection part of this process is about helping you understand what you are studying, why you are studying it, and what it means to you as well as to the world outside of academia.

Process/Development

The Interdisciplinary Studies program, and this set of assignments, gives students structured freedom—the ability to design your major, and even name it!

There are many possibilities, and since interdisciplinary students tend to have many wide and varied interests, it is good to start thinking about how your courses fit together early in your program. The following steps follow UMA's INT 201 course plan, a one-credit course that helps students determine their program of study as well as their larger interests in and out of academia.

Students/readers may take INT 201 or may complete these assignments—a set of 10 exercises that ask the student to reflect upon their academic interests, to get familiar with the courses that are offered at/through UMA (or available to a student more generally), to consider ideas about interdisciplinarity, to access personnel (advisers/professors) and resources, to design a program, and—ultimately—to write their Statement of Interest and Intent. (Best completed in the student's third or fourth semester, but transfer students and latecomers should do this work right away.)

COURSE OUTCOMES

Students will:

~Learn basic introductory ideas about interdisciplinary studies.

~Develop a Statement of Interest and Intent that outlines their INT program of study.

As a result of taking this course students will be able to:

~Better understand their academic interests and goals.

~Explain what interdisciplinary studies is and how their work is interdisciplinary.

READINGS

An excerpt about Interdisciplinary studies provides a foundation.

Repko, Allen F. “Defining Interdisciplinary Studies.”
Interdisciplinary Research: Process and Theory.

There are many different origin stories for “interdisciplinary studies.” Students will also select one of the following readings:

Klein, Julie Thompson. “Introduction: Humanities, Culture, and Interdisciplinarity.” *Humanities, Culture, and Interdisciplinarity: The Changing American Academy*.

OR

Lattuca, Lisa. “Chapter 1: Considering Interdisciplinarity.”
Creating Interdisciplinarity: Interdisciplinary Research and Teaching Among College Faculty.

OR

Crowe, Malcolm. “Research Today.” John Atkinson and Malcolm Crowe, eds. *Interdisciplinary Research: Diverse Approaches in Science, Technology, Health and Society*.

OR

Rowe, John W. “Introduction: Approaching Interdisciplinary Research” Frank Kessel, Patricia L Rosenfield, Norman B. Anderson, eds. *Interdisciplinary Research: Case Studies from Health and Social Science*.

The coursework that follows can be used to get to know your academic interests and goals better. New students, as well as transfer students, can follow this map to universal interdisciplinarity.

COURSEWORK

Assignment 1: Brainstorming Interest

Brainstorm subjects and ideas that you are interested in.

*

What interests you about these subjects/ideas?

~

*This extra blank/open space is for you to make notes. It's your handbook.
Write in it!

Make a list of the classes that you have most enjoyed so far.

What did you like about these classes?

Assignment 2: Getting Familiar with Courses and Programs

Look through the UMA catalog at the majors and minors and look at the courses offered. Make a list of classes that you want to take. Select 5 classes in each of at least 3 (or more) areas.

What makes you interested in these classes?

Assignment 3: Understanding Interdisciplinary Studies

Read the common reading by Allen F. Repko.

Write an essay (approx. 500 words): What is interdisciplinary studies? How is INT different from disciplinary approaches? What are the values of interdisciplinary inquiry?*

Assignment 5: Expanding Interdisciplinarity

Read the selected reading (Klein, Lattuca, Crowe, or Rowe).

How does this reading build upon your knowledge of INT? How does this reading help you to understand your education so far?

~

*For some of these assignments you can continue to make notes; however, you may want to move quickly to the computer. You will have to type anything that you are turning in.

Assignment 6: Beyond Education

Do some research about the kind of work that you might do after graduation. Consider graduate schools, careers, service and any other relevant post-graduation avenues. What do you want to *do*? Talk to some people who do the kind of work you want to do.

What avenues are you interested in? How do you think interdisciplinary studies will prepare you for this work?

Assignment 7: Personal Connections

Write a personal narrative (of approx. 500 words) about why you want to be an INT major. What made you choose this major? What interests you about INT? What classes do you want to take? What subjects/disciplines are you interested in for your areas of emphasis and concentration? What do you hope to do with an INT major?

What do you want to know more about INT? What are your concerns about being an INT major?

Assignment 8: Building a Program

Make a list of possible areas of emphasis and concentration. Compare the list of courses that you have taken (from assignment 1) and the courses from the UMA catalog that you are interested in taking (from assignment 2). Where do these courses line up with your emphasis and concentration? Brainstorm some ideas of names for your major.

Working with your INT Committee/Advisers, establish your areas of emphasis and concentration and fill out the paperwork that details your program. This program becomes your map for your interdisciplinary explorations.

Assignment 9: Assessing/Analyzing a Program

Using ideas from the common and choice reading for this course, and examples from your previous and future coursework, describe and explain the interdisciplinary dimensions of your areas of emphasis and concentration. How are these areas related? How does one area illuminate or contextualize another area? What courses do you plan to take and how do you see these courses fitting into your program? (approx. 500 words)

Assignment 10: Final

Write your Statement of Interest and Intent. (700-1000 words) This statement will be included with your program of study and submitted to the INT Council for approval.

Assignment 9 is a rough draft of this Statement. Your Statement of Interest and Intent should explain why you want to be an INT major and should outline your proposed program. You should describe and explain—generally and specifically—how your program is designed and why it is set up this way. You should

explain and illustrate the interdisciplinarity of your program through specific examples of your courses, explained and analyzed in relationship.

While this Statement has personal elements, it should illustrate your academic engagement, interest, and understanding of interdisciplinary studies and how you see the inter-related aspects of your interdisciplinary program.

This Statement is the culmination of your explorations and establishes a map and a touchstone as you complete your coursework and plan your capstone and internship.

...

Once you complete this course, or this sequence of assignments, you should have a better idea of what you are interested in studying, where you want to go with your education, and what courses, advisers, and sources can get you there.

Or maybe you feel like you don't. That's okay too.

Interdisciplinary students tend to be interested in learning for the sake of learning; we change our minds as our exposure to new ideas allows our interests to expand.

Interdisciplinary programs were made to be flexible. There is a window of opportunity for adjustments, but if you have the time and resources (money) you can change your mind as much as you like. However, for those looking for some efficiency, working closely with faculty early in your program (as this sequence of assignments encourages) will help to keep you on track.

Context and Vision

At this part of the process*, the INT major might feel a bit overwhelming. One important thing to remember is that all learning is a process and takes time.

You've got a program—classes to check off as you move toward your degree. Even without these added structures, interdisciplinary students should continue to think about their program of study overall, and the ways in which the pieces relate to the whole, the process to the goal.

Take time and space during your studies for the spaces between and among.

Some programs will make room for explicit connections and opportunities to practice interdisciplinarity. In many cases, you will have to make your own connections.

Use this extra blank space to write down any questions you have...

Continuing Interdisciplinary Studies at UMA

The next Steps for UMA Students include two more one-credit courses (301 and 302) as well as the Capstone and Internship. Since the INT program continues to be in development, there may be more opportunities—more classes that work toward integration.

INT 301 will help you make connections between and among your courses and to link courses explicitly through a shared assignment.

INT 302 will give you space to reflect upon the process as you develop a capstone and internship to complete your program.

There may also be opportunities for special integrated interdisciplinary courses that sometimes include travel and/or service learning or civic engagement.

The capstone (495) brings all the strands and skills together; the internship (496) provides the opportunity to put ideas into action/practice.

~

*Having completed the set of INT 201 assignments and your Statement of Interest and Intent. Or, having reflected upon your education so far and your interest in interdisciplinary studies generally or specifically.

Part IV: Tools

“Art is not a mirror held up to reality but a hammer with which to shape it.”

—Bertoldt Brecht

“The master’s tools will never dismantle the master’s house.”

—Audre Lorde

“Your heart is a weapon the size of your fist. Keep fighting.
Keep loving.”

—Graffiti on a wall in Palestine

The tools included here offer practical skills that will help any student succeed. The first chapter helps you develop your writing skills across, between, and among the disciplines. This practical advice has been developed over a decade of teaching English composition/College Writing as well as writing intensive classes.

The second chapter provides a less-tangible tool—awareness. Interdisciplinary opportunities often provide an opportunity to experience and reflect upon cross-cultural experiences and courses that present diverse ideas.

The third chapter provides some more unexpected tools—techniques that develop the mind and body and help us to do the work of education—learning, thinking, writing, discussing, measuring, evaluating, designing, collaborating, and creating—while finding balance and wellness.

College Writing as Interdisciplinary Studies

“That is what learning is. You suddenly understand something you’ve understood all your life, but in a new way.”

“Think wrongly, if you please, but in all cases think for yourself.”

—Doris Lessing

“. . . Learning to write is not a matter of learning the rules that govern the use of the semi-colon or the names of sentence structures, nor is it a matter of manipulating words; it is a matter of making meanings, and that is the work of an active mind.”

—Ann E. Berthoff, as quoted by James A. Berlin

“It is good to have an end to journey toward; but it is the journey that matters, in the end.”

—Ursula K. Le Guin

College Writing prepares students to write according to academic conventions that cross disciplines. Even though each discipline has specific rules and norms for writing, there are some basic tools that can help you develop your writing in ways that make it adaptable across disciplines as well as ways that lend themselves to writing interdisciplinary papers.

In my College Writing (ENG 101) class I give students an idea of the relationship between and among the disciplines. I exaggerate and mock the ways in which disciplines see each other and the

weaknesses that we see in other disciplines, especially when we assume that our way is the best.

For instance, I explain that sometimes people in the sciences will determine that those in the social sciences are not practicing “real” science, and those in the social sciences will often consider work in the humanities to be less rigorous or important compared to their more logical, methodical treatment of culture and society. I sarcastically describe the ways in which the humanities folks tend to be afraid of science and math and avoid both at all costs. All of these divisions are cemented by disciplinary organization and segregation.

As we consider the methods and ways of seeing that each of these areas brings to our consideration of, for instance, a theme or to writing itself, it becomes clear to students that these divisions have important functions, but that they are often arbitrary. And these divisions often get in the way of seeing all the sides to an issue, all the players in the game, and all the shades to the pictures.

College Writing can help students to see the ways in which disciplines and knowledge are connected, despite different citation formats and different structure to writing projects. The tools I outline here are the basics to successful college writing, but they are applicable to a wide array of college endeavors, especially within interdisciplinary frameworks.

If you are unsure about the expectations of an assignment, just ask. We rely upon our students to let us know what works and doesn’t work. Sometimes we think our instructions and writing prompts are clear when they are not. Sometimes we offer too much instruction, sometimes not enough.

Read. Read. Read. Read the instructions for assignments carefully. **And then read some more:** Read everything. Read for pleasure. Read real books, made of paper. Read e-books and blogs

and articles and graphic novels. The more you read, the more you get a sense of what effective writing is. The more you can recognize ineffective writing, the more you can work to emulate the effective techniques consciously and defend writing choices. Reading engages the mind and trains the body to be still.

Write. Write. Write. The more you write, the better you get. Share your writing. Read it aloud. Try different kinds of writing. Write for fun. Pre-write. Revise and re-write. Writing is a process. It takes work. Find inspiration from your favorite writers.

Don't let jargon rule you. Being familiar with the jargon of academia more generally, of individual disciplines, of interdisciplinarity, and of writing specifically, can be overwhelming at times. Don't be intimidated and don't use words or concepts until you are ready. Jargon is just language that is trying to communicate complicated and novel ideas. The more you read and study, the more you will become comfortable with this language. Being interdisciplinary also means being proficient in the languages of many disciplines—at least to a certain extent.

Grammar is a set of rules, but, more importantly, it is a set of tools. The more you know about the rules, the more you can use them as tools to make the points you want to make. Many teachers will be sticklers about the rules, whether enforcing academic standards or fostering clear communication. Generally, we are concerned more about the content of the paper, the argument, the use of evidence, the clarity of organization, and the whole.

The basics of every paper begin with a thesis statement. Even if you are not writing a traditional academic paper, even if you are innovating on format, what you are saying in your paper should be clear to your reader. Your thesis statement is not a question. Still, thesis “statement” is misleading. Your thesis is an argument and you should always ask of your thesis: “so what?” What is so interesting and important about what you have to say?

Rhetorical Questions can be used effectively, but should not be overused. If you are asking too many questions in your paper, you aren't making your case. What questions move your argument forward? What questions keep your reader thinking even after they have finished reading? Questions are important to ask yourself as you consider resources, construct arguments, and analyze ideas.

Look for Patterns, Connections. Integration is more than compare and contrast. Again, ask yourself, "so what?" What is interesting, compelling, problematic, original, or enlightening about this pattern or set of connections? What can you teach your reader about the texts, or the bigger world, through these patterns?

Use evidence effectively. Every piece of evidence you use should be incorporated into your argument and integrated into your sentences. You should introduce the quote and you should provide analysis of the quote that shows the relationship of this piece of evidence to your larger argument. Don't just re-state—extrapolate, question, analyze, riff, synthesize.

Know when to be concise and when to elaborate. Lengthy descriptions of too many details can definitely weaken your paper. It can also take up space that you can use more effectively. Sometimes a brief summary is needed to make a point, but keep it brief. At the same time, I often tell my students that for every quotation or every piece of evidence you should have at least two sentences of commentary and analysis. This two sentences is *minimum* and is not a steadfast rule; in most cases more analysis is always better.

Transition between sentences and between paragraphs. Don't assume that your reader understands the connections you are making. This is the case in all writing, but is especially important for students doing interdisciplinary writing. Respect your audience, but assume that they need you to lead them through your argument. Point them in a direction and connect the dots along the way.

Offer observations, connections, analysis; don't try to solve all the problems of the world. Once we start to be exposed to bigger ideas and problems, it can be tempting to try to solve them through your argument and paper. Don't give into this temptation. Most issues cannot be solved by dissertations, books, or collaborative research endeavors. What we can do is offer insights and join the larger conversation. Sometimes we might offer solutions, but we should recognize our own limitations.

Be informed, but recognize your limitations. You have to read a lot and skim a lot and ask a lot of questions and write a lot of drafts. There's always another source that can add insight. So, be clear what the expectations of the assignment are, and remember that you can't cover everything. Tools of summary and paraphrasing are good to have, but always cite your sources.

Don't leave citations, bibliographies, or sources until the end. Keep track of your sources and citations from the beginning and your work will be much smoother in the end. I offer this advice as a result of multiple, repeated failures to do so in my own work.

Be careful (and firm) with the "I." A lot of professors will tell you that you cannot write in the first person. While this is the standard for writing in the science and social sciences, as well as in many fields within the humanities, the idea that you can write what you think about a topic and how you understand the pieces as they come together without using first person is misleading and misguided. Even when not writing in first person, whatever you write is what you know and what you think about what you know. How we frame our argument, the resources that we use, the language, the connections, are the work of the individual interdisciplinary researcher/writer. Even as your writing is your voice and your "opinion," you should still work to minimize the use of "I." I think, I feel, I believe are all superfluous. Find your voice and don't be afraid to use it.

Be equally careful with the “You.” The “you” is often used in hypothetical ways, but it should only be used when directly addressing the reader. I use “you” here when I am talking directly to the reader/student about something that you might do to better understand or practice interdisciplinarity. You might think you want to address the reader, but it’s always important to consider your audience—which is bigger than your professor, but still includes us. Using “we” can be problematic, but rephrasing from “you” to “we” is almost always a better choice. I use “we” here because we are all writers, myself included. But “we” is generally a collective “I.” Be careful whom you are speaking for, but be brave too.

Mostly, be purposeful and conscious with voice and argument.

Write and revise and write and rewrite and polish, but know that writing is never finished. There is no getting around the need for multiple drafts. Some professors will want to see all your drafts; some will want to see none. Some writing will be timed or in-class writing. As you consider all of the advice on this list, you are working toward revision. As you clean up typos and small errors, you are proof-reading. Know the difference. Do both. Accept that there are an average of at least three errors per published page, but strive toward perfection.

Have confidence ... and humility. The best writing comes from a confident voice. Very few of us are confident in our writing, so you can fake this confident voice until you find more confidence. You *are* a writer. But be humble. We can all improve our writing and it can be difficult to have others critique our writing, especially when we see it as criticism instead of constructive feedback. Be open to the process and keep growing as a writer.

Diversity and Critical Consciousness

“But the hushing of criticism of honest opponents is a dangerous thing. It leads some of the best of the critics to unfortunate silence and paralysis of effort, and others to burst into speech so passionately and intemperately as to lose listeners. Honest and earnest criticism from those whose interests are most nearly touched,—criticism of writers by readers, of government by those governed, of leaders by those led,—this is the soul of democracy and the safeguard of modern society” (462).

—W.E.B. DuBois, *The Souls of Black Folk*

The sameness that can propagate in traditional disciplinary spaces leads to the “hushing of criticism” while the kind of criticism that DuBois advocates speak to one of the important dimensions of interdisciplinarity. To be adept critics we need to be flexible learners; we need to have a sense of the bigger picture as well as the defining details.

Critical thinking skills are a goal and outcome for many different programs and for most general education programs. “Diversity” is an old politically correct term and concept that has helped to make education more inclusive of difference. But “diversity” alone is limited, often superficial—celebration rather than social justice. It lacks a critical component, a radical component that gets to the root.

diversity + critical thinking = critical consciousness

Critical consciousness recognizes the importance of intersectional analysis—a consideration of race, class, gender, and sexuality in the context of identity and capitalism, white supremacy, patriarchy, and heteronormativity.

Critical consciousness helps us to understand social and cultural construction and power and empowerment and to make sense of the individual and the structural, the personal and the institutional.

Different kinds of critical consciousness include: double consciousness, feminist consciousness, oppositional consciousness, differential consciousness.*

With conscious application of theories of difference, and the integration of interdisciplinarity and social justice, critical consciousness gives students an important tool: the ability to see beyond the surface of things (and the desire to work toward changing the veneer and the substance beneath). “Honest and earnest criticism” is a tool of diversity and critical thinking.

This tool is a bit obtuse, which fits its use. In other words, students more aware of difference, equity, power, culture, and social structures are assets—as workers, citizens, parents, community members—in an increasingly diverse and global world.

~

*These are complex ideas that are defined, debated, and disseminated by interdisciplinary scholars like W.E.B. Du Bois, Chela Sandoval, and bell hooks (who argues: critical thinking + literacy = transformation). These theories cross the humanities and social sciences, as well as American studies, cultural studies, and ethnic studies. See the Resources section at the end of this book for further reading.

Self-Care for the Mind and Body

“Caring for myself is not self-indulgence, it is self-preservation, and that is an act of political warfare.”

—Audre Lorde

Throughout my graduate education, I was also a fitness instructor. These dual worlds were often difficult to balance—but they are also necessary for balance. Not only has my fitness life proven to be instrumental in my academic life (ie: my second book *Women and Fitness in American Culture* and my academic class *American Fitness: Culture, Community, and Transformation*), my academic life has informed my fitness teaching, making me more critical, more conscious, and more connected. This is interdisciplinarity at its best.

I only recently learned the importance—or even the existence—of the concept of self-care. This might seem to be an odd addition to a book like this; however, learning about self-care will carry increasing importance in the future—in and out of academia. This section builds upon my interdisciplinary work in fitness, work that has become more interdisciplinary as I have begun to explore yoga, mindfulness, and science (philosophy, psychology, and neuroscience).

While self-care is important for everyone—and while anyone in academia may benefit from self-care—self-care is especially important for those who work in the service professions, who spend a significant portion of time serving others.

Self-care is also important for considering the whole person. While we are students, we are also a lot of other things too—employee, partner, parent, family member, friend, etc. Self-care helps us to keep a healthy balance and to be present for all the people in our lives who need us. It also helps keep us together.

Self-care is also an important concept in terms of interdisciplinary studies because such a path requires determination, an open-mind, attention to details, a sense of the bigger picture, patience, vision, and more. In fact, self-care is an important function of interdisciplinary studies. Bringing together yoga, mindfulness, therapy, movement studies, and neuroscience, interdisciplinary researchers are discovering mind/body connections that, in turn, might inform how interdisciplinary studies are practiced.

The tools here are practical and proven, but require commitment and practice—much like interdisciplinary studies. Thus, these tools are practical as well as metaphorical. They are also often segregated from academia, a space that prefers a focus on the mind, sometimes with the result of a neglect of the body.

Get physical to balance out all the mental: Any kind of physical activity is a good balance to all of the mental work of academia. When reading, writing, and researching, our bodies also get locked into rigid postures and we sit still for long periods of time. Any movement you enjoy is the movement to do. A short walk, a hard run, a dance class, swimming, yoga, Tai Chi, weight lifting, gardening, sex. Certainly there are benefits in variety.

There is some interesting interdisciplinary research that shows that novel movement—new movements that our body is not used to—can help to increase neuroplasticity and actually rewire our brains. We walk and move in very linear and structured ways—just like we learn in rigid and structured ways. Novel movement is akin to interdisciplinary studies—both move our minds and bodies in new ways. In the future, interdisciplinary science will tell us more about the importance of movement, but already the mind/body connection is strong.

Stretch: With or without the precursor of physical activity, stretching aids in recovery from activity and increases flexibility—a metaphor for interdisciplinarity. We stretch our minds. While stretching the body helps to counter the rigid postures of academia, it can also help our mental work, especially combined with conscious breathing.

Conscious breathing: Paying attention to your breath sounds too simple to be a tool, but it's an important one for reducing stress. Conscious breathing is the most basic form of yoga; it is also a tool in mindfulness and meditation practices. Take deep, slow breaths—in through the nose, out through the nose—to promote a calm, mind and body. Fill your chest, ribcage, and lungs with your breath. Make your exhale longer to promote relaxation. There are a variety of breathing techniques to explore.

Mindfulness: In addition to paying attention to your breathing, mindfulness asks us to bring attention to movement and breath, to move more slowly—mentally and physically—than we are used to. It asks us to witness our movements, thoughts, and feelings without judgment. Mindfulness can be practiced in a variety of ways and includes paying attention to sensation, to how the body feels.

Meditation: There are many different forms of meditation that can be explored and developed over time. Meditation can be done moving, standing, sitting, laying. It can be done as a part of a yoga class or apart from it. Alone or in groups, inside or outside. Meditation is connected to mindfulness and conscious breathing.

Massage Therapy: Massage therapy is a privilege, but it is not a luxury. There are many different kinds of massage therapy that can provide relaxation and relief from tight muscles, promoting health and healing. Many therapists practice a variety of techniques and can work with the client to find the best treatment. Sometimes campuses have student rates or free massage during special events.

Mental Health Therapy: The stigma around therapy is lightening. Therapy can be a helpful tool to help us to better understand who we are and where we want to go. It can help us manage stress, process trauma, and ease anxiety. The relationship of therapist and client is important. We should find the right person to work with, but we can also take advantage of student counselling services and employee benefit programs. Both are often free.

Get Sleep: Our culture devalues one of the best tools for self-care. We have too much to do and we don't have enough time for restful, rejuvenating sleep. But the more we sacrifice this aspect of self-care, the more harm we do to ourselves. Studies have shown that the effects of sleep deprivation are like the effects of aging. Our performance and engagement suffer when we don't get enough sleep. A nap can help to add to missed sleep the night before.

Eat Well: Food fuels our bodies and our minds so it only makes sense they the better we eat, the better our minds and bodies will function. But food is complicated in our world—a function of privilege and a commercialized and politicized realm. Eating is cultural and psychological. Food is also a basic necessity. If you suffer from disordered eating, mindful eating might be worth further exploration.

Honor Your Feet/Seek Uneven Landscapes: Interdisciplinary research is also showing the connection between the feet and the rest of the body—physical, mental, and emotional. Simply walking (or dancing or doing yoga) barefoot can help to awaken the rest of the body and its connections with the mind. The nerve connections in our feet begin to be turned off as our feet are locked into our shoes and our environments are more and more paved and regulated. When we wake up our feet, we wake up more than our feet. It might sound a little crazy and downright impossible; however, it is worth exploring to see if it works for you.

Commune with Nature: Unplugging every once in a while can literally reset our minds and bodies. Nature can also remind us of all of the power and beauty in the universe and how small and insignificant each one of us is at the same time that it reminds us how interconnected we all are to each other and to our whole planet. Combine with other tools and move or stay still.

“Treat Yo’Self”: On the TV show *Parks and Recreation*, Donna and Tom have a special day where they treat themselves to all the luxuries they don’t usually get: pedicures, massages, shopping, eating. While this comedic representation is exaggerated for effect, the principle is important. The more you serve others (students, children, partners, parents, clients, etc.), the more important it is to give yourself a break. This treat can be as simple as a bit of time for yourself, or as luxurious as your budget allows.

Serve Others: If your life is a series of treats, then perhaps service is more appropriate. But, all of us can serve others as a way of promoting self-care. Some interdisciplinary classes might even incorporate service learning (or civic engagement) into the curriculum. Since education is a privilege, we have some obligation to give back to our communities.

All of these self-care tools are in your toolbox. What works for you is up to you to discover. These are tools to experience and experiment with, and add to. Since they work differently for different people, they are best experienced without preconceived expectations.

An Endnote for Students and Readers

There are many different ways to practice and understand interdisciplinarity. One of the assumptions and latent arguments that undergirds this work is the idea that “civic engagement” and interdisciplinarity go hand in hand. This relationship connects the university and the real world and ensures interdisciplinarity’s relevance. There are at least two other important aspects of interdisciplinarity that I do not develop here: the importance of an international/global perspective and the potential of technology.

The ideas I offer here skew toward the humanities for a variety of reasons. I work primarily in the humanities, and while social sciences are a significant part of my interdisciplinary work, the disciplinary line between humanities and social sciences can be difficult to negotiate. Sometimes the sciences are more easily integrated into the humanities, especially through my favorite medium—speculative fiction (or science fiction or dystopian fiction). Humanities texts have impacted the work of real science, sometimes providing an element of imagination that inspires innovation and reinvention.

However, the humanities also provide an important role in interdisciplinary studies because the humanities provide connections—the “sticky stuff”—a myriad of texts that explore human experiences and a set of lenses that establish the way we make sense of the world. Humanities are a significant portion of a liberal arts education and general education requirements (even as these requirements are contested and as they differ from institution to institution). Thus, every student experiences a humanities lens, making this lens a starting point for interdisciplinarity.

Any way we get to interdisciplinarity works. The universe of interdisciplinarity has many ways in and many dimensions we are only beginning to explore.

About the Author: Toward a Context for This Book

Sarah's interest in interdisciplinarity began before she had language for it. As an undergraduate she explored a year in an interdisciplinary living and learning community at a private college before she transferred to Humboldt State University, where she majored in a self-designed program in Interdisciplinary Studies. Combining English, Sociology, and Women's Studies for a major in Literature, Gender, and American Culture, Sarah's academic future was set before she realized it was an available future.

She continued to build on her interdisciplinary education with a M.A. in Literature and Culture and a Ph.D. in American Studies that brought all of this previous education together. Combining comparative ethnic studies and women's studies, Sarah's dissertation explored interdisciplinarity through culture and theories of consciousness. Sarah also gained valuable teaching experience in comparative ethnic studies and American studies and has since worked in several interdisciplinary academic positions, including her current position at UMA. She has had the opportunity to design and teach a variety of interdisciplinary courses for more than a decade.

In addition to her academic work, Sarah has taught group fitness classes throughout her education, connecting with a wider community. These two worlds have come together over the past several years through an academic class, *American Fitness: Culture, Community, and Transformation*, and her second book, *Women and Fitness in American Culture*. This work continues to grow and has been reaching into new interdisciplinary connections with science, mindfulness, and yoga.

Sarah's research, writing, and teaching are intimately linked and cover a range of topics that are considered and critiqued through American cultural studies and an interdisciplinary, intersectional lens. Her first book, *Pictures of Girlhood: Modern Female Adolescence on Film*, considers the coming of age story in films with girl protagonists. Her current work considers similar narratives in young adult dystopia in a course and book-in-progress with the working title of *Girls on Fire: Culture, Gender, and Justice in YA Dystopia*. In between and overlapping with these books, Sarah's work considers hip-hop, education, social movements, consciousness, popular culture, Octavia Butler, and intersections of identity and power.

These same topics are central to the many interdisciplinary courses that Sarah teaches in American studies and Women's, Gender, and Sexuality studies. Even her teaching in English reaches into the interdisciplinary elements of this discipline. She teaches a wide variety of courses from introductory courses to advanced seminars to capstones and internships. In these courses she aims to meet students where they are and to give them flexibility in their assignments. Students are encouraged to connect with material in multiple ways and to put ideas from class into practice. Sarah works to empower her students and equip them with critical, interdisciplinary tools.

This book is an extension of these goals, asking any student, and every student, to shape their education in a way that speaks to their interests and goals and works toward connection, integration, and transformation.

You can find more information about Sarah's work on her website at www.cultureandmovement.com and can contact her at sarah.hentges@maine.edu.

Works Cited*

- Anderson, Mark Cronlund and Irene Maria F. Blayer, Eds. *Studies on Themes and Motifs in Literature: Interdisciplinary and Cross-Cultural Narratives in North America*. New York: Peter Lang, 2005. Print.
- Calhoun, Craig and Cora Marrett. "Forward." *Interdisciplinary Research: Case Studies from Health and Social Science*. Frank Kessel, Patricia L. Rosenfield, Norman B. Anderson, eds. Oxford UP, 2008. Print.
- Clair, R.P. *Zombie Seed and the Butterfly Blues: A Case of Social Justice*. Rotterdam, The Netherlands: Sense Publishers, 2013. Print.
- Crowe, Malcolm "Research Today." *Interdisciplinary Research: Diverse Approaches in Science, Technology, Health and Society*. John Atkinson and Malcolm Crowe, eds. Hoboken, NJ: John Wiley and Sons, 2006. Print.
- Haynes, Carolyn, Ed. *Innovations in Interdisciplinary Teaching*. American Council on Education. (With the support of the Association for Integrative Studies). Oryx Press. Series on Higher Education, 2002. Print.
- Huston, Aletha C. "A Path to Interdisciplinary Scholarship." *Interdisciplinary Research on Close Relationships: The Case for Integration*. Lorne Campbell and Timothy J. Loving, eds. Washington D.C.: American Psychological Association, 2012. Print.
- "Closing Commentary: Fostering Interdisciplinary Research: The Way Forward" Patricia Rosenfield and Frank Kessel. Frank Kessel, Patricia L. Rosenfield, Norman B. Anderson, eds. *Interdisciplinary Research: Case Studies from Health and Social Science*. Oxford UP, 2008. Print.

- Klein, Julie Thompson. *Humanities, Culture, and Interdisciplinarity: The Changing American Academy*. Albany: State University of NY Press, 2005. Print.
- Lattuca, Lisa. *Creating Interdisciplinarity: Interdisciplinary Research and Teaching Among College Faculty*. Vanderbilt Issues in Education. Nashville, TN: Vanderbilt UP, 2001. Print.
- Miller, Toby. *Blow Up the Humanities*. Philadelphia: Temple UP, 2012. Print.
- Repko, Allen F. with Michelle Phillips Buchberger and Rick Szostak. *An Introduction to Interdisciplinary Studies*. Thousand Oaks, CA: Sage Publications, 2014. Print.
- Rowe, John W. "Introduction: Approaching Interdisciplinary Research." *Interdisciplinary Research: Case Studies from Health and Social Science*. Frank Kessel, Patricia L. Rosenfield, Norman B. Anderson, eds. Oxford UP, 2008. Print.

~

*I do not cite the sources for the epigraphs, only the works discussed in the text. In the next section I provide more resources for further study.

Other Interdisciplinary Resources

This brief selection of resources will get you started beyond this book. I've organized these resources in sections that reflect Universal Interdisciplinarity's ideas and structure.

Interdisciplinary Introductions

The books by Repko and Klein in the works cited section are both good books for more introduction to interdisciplinarity. Repko's work is oriented toward research but about half of the book provides definition and discussion about disciplinarity and interdisciplinarity.

Klein's work is more based in the Humanities and Cultural studies. She has written a lot of books. *Humanities, Culture, and Interdisciplinarity* is my preferred intro text. She also provides an excellent bibliography in *Creating Interdisciplinary Campus Cultures: A Model for Strength and Sustainability*.

R.P. Clair's *Zombie Seed and the Butterfly Blues: A Case of Social Justice* (from the works cited section) provides a compelling introduction and valuable ideas about interdisciplinarity and stories; however, the novel is not worth the read. There are much better novels we can use to apply Clair's introduction.

For instance, Charlotte Perkins Gilman's now classic utopian text, *Herland*, offers some interesting ideas about compulsory and connected education, in addition to its critiques of masculinity and femininity. It explores science and technology, economics and religion, family and motherhood, and it provides a sociological perspective that also recognizes the power of culture.

Several of my favorite books invite an interdisciplinary analysis: Ruth Ozeki's *My Year of Meats* or *A Tale for the Time Being*;

Alaya Dawn Johnson's *The Summer Prince* (YA dystopia);
Octavia Butler's *Parable of the Sower* and *Parable of the Talents*.

These Ozeki books are also recommended by my colleague, Lisa Botshon, who has excellent taste in novels. It took me a while to read a book about meat—as a vegetarian, the topic is not on my list of favorites—but this is one of the best books I've read.

Resources for Interdisciplinary Research

Repko also has a book called *Interdisciplinary Research: Process and Theory* that is even more research-oriented, as the title suggests. Much of the material in this book repeats from *Introduction to Interdisciplinary Studies*, but the book is a solid textbook for interdisciplinary research.

Enhancing Communication & Collaboration in Interdisciplinary Research, edited by Michael O'Rourke, Stephen Crowley, Sanford D. Eigenbrode, and J.D. Wulfhorst, is an extensive book, including preface, intro (ch1 and 2: communication and collaboration), Part I: Theory, Part II: Case Studies, Part III: Tools, Part IV: Contexts, Part V: Conclusion.

John Atkinson and Malcolm Crowe, eds. *Interdisciplinary Research: Diverse Approaches in Science, Technology, Health and Society* is a “book is for research activists, especially those involved in education institutions and research degrees” (xi). It aims to “provide windows into a variety of approaches” in the hopes that “armed with this information and insight, readers will consider their research questions and challenges from a broader base” (xi).

The forward and introduction to *Interdisciplinary Research: Case Studies from Health and Social Science*, edited by Frank Kessel, Patricia L. Rosenfield, Norman B. Anderson, are particularly useful to understanding interdisciplinarity generally and in the sciences and social sciences.

Resources for Academia and Beyond

The *Chronicle of Higher Education* and the Vitae Blog are great resources for all sorts of conversations related to academia. Some of the resources are free and some are available via the library or subscription.

Mike Rose, *Back To School: Why Everyone Deserves a Second Chance at Education* illustrates the value of education to everyone.

The book by Toby Miller listed in the works cited, *Blow Up the Humanities*, provides an interesting argument about the need for change in the Humanities. Helen Small's *The Value of the Humanities* is, as the title states, more concerned with discussing and illustrating the value of the Humanities.

I was reminded of Paul Kivel's *Uprooting Racism: How White People Can Work for Social Justice* by my fabulous colleague, Kati Corlew, whose work in psychology and climate change is inspiring. She notes that this book lends itself to "activism and ally training, using history, communications, social sciences, and critical theory."

Cynthia Kaufman's *Ideas for Action: Relevant Theory for Radical Change* is exactly as it sounds. It explores ideas—or theories—ranging across culture and politics; capitalism, racism, and gender-based oppression; as well as nature, utopia, and democracy. The last chapter asks the question so many students ask, "Where Are We Going and How Do We Get There?"

Resources for Critical Consciousness

The two books in the section above, by Kivel and Kaufman, also fit in this section. Both of these books provide some of the introductory knowledge needed to better understand the resources in this section.

Paulo Freire’s classic, *Pedagogy of the Oppressed*, revolutionizes education and chapter 2 is especially helpful as it explains the difference between the “banking method” of education and education for critical consciousness.

Oppositional Consciousness: The Subjective Roots of Social Protest, edited by Jane Mansbridge and Aldon Morris, is a rich collection of essays that is categorized as political science/sociology, but also considers ideas that cross, and unite, disciplines.

Pretty much anything written by bell hooks is a good source for considering critical consciousness. While a bit dated, Sut Jally’s interview with her—*bell hooks: Cultural Criticism and Transformation*—is a great resource (on YouTube!) and includes ideas like that of “white supremacist capitalist patriarchy” and the “enlightened witness.”

For a challenging but seminal read, Chela Sandoval’s *Methodology of the Oppressed* is enlightening. She also wrote an article titled “‘U.S Third World Feminism’: The Theory and Method of Oppositional Consciousness in the Postmodern World.” Both of these pieces are highly scholarly and revolutionary.

Resources for Self-Care and Fitness

The UMA Nursing program is a great resource for self-care. Every spring they host a self-care fair that includes yoga, meditation, reiki, aroma therapy, and more. Their program is also cutting edge in its inclusion of interdisciplinary approaches to health and healthcare, integrative healing practices, and the training that recognizes the connection between mind and body. My colleagues, Carey Clark and Lynne King, model interdisciplinary practices in their teaching, writing, and service.

My website www.cultureandmovement.com provides connections to a variety of feminist fitness resources as well as to my book, *Women and Fitness in American Culture*, an interdisciplinary discussion about fitness in American culture.

Ms. Fit Magazine is an online fitness magazine that offers a feminist fitness approach and it often includes articles about self-care and other important feminist fitness discussions and resources.

The book *The Unapologetic Fat Girl's Guide to Exercise and Other Incendiary Acts*, by Hanne Blank, offers practical advice for anyone who wants to start being more active and healthy. It also provides a critique of a fitness culture that shuns “fat.”

Jamie Marich's book *Dancing Mindfulness: A Creative Path to Healing and Transformation* offers space for reflection as well as practical guidance. Jamie's writing is fresh and approachable, weaving together personal stories, therapeutic insights, practical skills, and opportunities for reflection and practice.

Bo Forbes combines yoga, mindfulness, and neuroscience for some interesting food for thought as well as effective methods of self-care. She regularly presents at yoga conferences and trainings and more information can be found on her website boforbes.com.

Acknowledgements

This book has been on my mind for a long time; it wasn't until I was granted a Trustee Professorship, and spent a semester doing research and curriculum development, that the ideas began to click into place.

The decision of the UMA colloquium committee to work with the theme of Interdisciplinarity in the 2015-16 academic school year also acted as an impetus, and conversations with my colleagues helped me to expand this work. Some of the resources here come from colleagues' suggestions when we decided our chosen colloquium book was not one we wanted to recommend to the whole campus.

I'd also like to thank my research assistants during the spring 2015 semester—Kendralee Tessier and Lauren Verow—who helped with this project, but also helped to open up some time for me to make room for this project. Thanks also to Tessa Pyles who read a rough draft and gave me more confidence in this project, to Lisa Botshon for her helpful edits, and to Jessica Bishop for her style check.

Most of all I'd like to thank my students. Their passion for learning and their recognition of the value of interdisciplinary studies, American studies, and women's and gender studies continues to inspire me to do my work. This book is an attempt to help my students—and any other students who might benefit—as they make their way through their education and through their lives.



© Sarah Hentges, 2015

Profits from the sale of this book spread interdisciplinary love.

Please share this book and cite me when you reference it.