

Interdisciplinary Instruction: An Honors Program Requisite and Informing General Education Courses

With the implementation of Common Core-guided curricula in 42 states, the incoming class of college students will be significantly different from students who enrolled as recently as three years ago. These incoming students expect, and deserve, a more robust and engaging educational experience as an extension of the deep thinking required in the Common Core standards. After being exposed to the conceptual framework of the Common Core initiative, today's freshmen require an integrated approach to education. Indian River State College's Honors Program provides an exemplary interdisciplinary experience for our students, and we believe this model has the potential to revolutionize the general education delivery currently in place at community colleges around the nation.

The Honors Program commitment is to provide an engaging learning experience that enhances students' communication and critical-thinking skills, promotes community involvement, and prepares students to succeed academically, professionally, and personally. The core requirement of the Honors Program is a combination of courses (i.e., five three-credit courses from each of the general education areas) that are thematically related and "tell the story" of the human condition. These five courses reveal the interrelations and interdependence of interpretive subjects (i.e., philosophy and literature) and scientific disciplines (i.e., science, technology, engineering, and mathematics). Taken together, the five courses outlined below meet the general education requirement:

- **BSC 2010** *General Biology I, Honors*
- **ENC 1101** *English Composition I, Honors*
- **IDS 1110** *Pursuit of Knowledge, Honors*
- **PSY 2012** *Introduction to Psychology, Honors*
- **STA 2023** *Elementary Statistics, Honors*

Each course meets Florida's standard course descriptions and outcomes (as defined by *Statewide Course Numbering System*); however, they have been redesigned to also meet the outcomes of the Honors Program. Specifically, each course aims to support the theme of the Honors Program: a narrative about the ways in which STEM and the humanities, arts, and social sciences are mutually supportive fields of inquiry and include opportunities for applied learning and

student-directed scholarship. Each course is intertwined as described below:

- **BSC 2010, *General Biology I*:** This course emphasizes the impact and importance of evolutionary biology and the theory of natural selection on contemporary views of human origins and the human condition. The course links the evidentiary foundation of natural selection to discussions in statistics (STA 2023) and philosophy (IDS 1110), in the interest of revealing the logical and empirical support of the theory. Additionally, the course discusses the advances in technology that have yielded additional evidence for the theories of modern biology, and the points of connection between biology and modern psychological theories of mind and behavior (PSY 2012).
- **ENC 1101, *English Composition I*:** This course explores key themes related to perennial human concerns (IDS 1110) and links them to contemporary discussions of science (BSC 2010) and the mind (PSY 2012). Students produce essay-length researched arguments that demonstrate their new perspective on topics including empathy, self-identity, and diversity, and impact of technology on the human condition.
- **IDS 1110, *Pursuit of Knowledge*:** This course examines what it means to be a "scientific citizen," in order to better understand and participate in the process by which science comes to conclusions about the natural and social world that influence our society. Philosophical theories and problems are explicitly connected to the issues raised in composition (ENC 1101) so students see:
 - o The intersection between descriptions of the human condition and normative claims about our responsibilities to others; and
 - o The gaps and linkages between scientific explanation (BSC 2010 and STA 2023) and non-scientific assertions that arise in areas such as ethics and politics.
- **PSY 2012, *Introduction to Psychology*:** This course serves as the connecting piece between discussions of science/scientific methodology and the descriptions of the human experience. The course shows how social science methodology:
 - o Is connected with and differs from the methods of the natural sciences;

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- o Can be applied to well-defined problems in the humanities. Additionally, the course examines key assumptions in the context of contemporary psychology regarding reductionism, human biology, and the connections between mathematics (STA 2023), science (BSC 2010), ethics (IDS 1110), and literature (ENC 1101).

- **STA 2023, *Elementary Statistics*:** This course not only covers the study of statistics, scientific methodology (BSC 2010), and the logic of induction, but it also introduces students to philosophy (IDS 1110) and composition (ENC 1101) in a study of educational philosophy/learning. The purpose of the course, in addition to teaching statistical methods, is to build an appreciation for empirical methodology and the relationship between observations and theoretical assertions.

The coursework culminates in students' grasp of the similarities between the natural and social sciences—hence the nature of empirical evidence in a variety of domains—as well as the challenges to scientific explanation presented by humanities disciplines, subjects that explore human motivations and values. Since these courses also cover general education competencies, the Honors Program core extends and elaborates students' understanding of the general education learning outcomes for the Associate's degree. At the same time, the courses keep the core of the human condition central to the learning experience within the Honors Program.

A student response from an attendance assignment in STA 2023:

I am taking this course in hopes of learning something new . . . Being an honors course, this class excites me because I found all my previous honors courses to be the best educational experiences. I always strived to receive the best grades in high school, but as I switched to college classes . . . I strive for something greater. About two years ago, I would be writing this essay . . . to boost my GPA, but now I can honestly say I am taking this class to better myself through education, knowledge, and, especially, experience. This semester, I plan to get the most out of all the opportunities I am offered.

In the Honors Program, we see the above sentiment from the majority of those who graduate. Our goal is to have students seek learning for intrinsic reasons, so we believe this model has generalizability to the current General Education delivery model.

The core principles of a successful interdisciplinary program include:

1. **Administrative Support:** Administrators supported the development of the Honors Program core narrative and continue to support the growth of the program as it progresses to include more courses, different learning environments (e.g., distance

learning), and a larger number of participating students. For example, faculty involved in the Honors Program are given special recognition, and their involvement in the process counts toward their committee responsibility. Administration supports offering Honors-designated courses with lower enrollment caps in order to foster the professionalization of students and provides an Honors-designated space (i.e., a classroom) in the center of the main campus to serve as a meeting space and resource room for Honors students and faculty.

2. **Innovative Faculty:** This has to be a faculty-led effort. Faculty need to commit to adjusting their teaching and connecting their discipline-specific curriculum to the interdisciplinary mission. For example, it is necessary to have a statistics instructor who is confident in grading students' philosophical essays, or a composition and literature professor who encourages students to examine the origin of language and delve into scientific theories on morals and ethics.
 3. **Core Focus:** The goal of the Honors Program is to intertwine typically separated general education core disciplines to address concerns about the human condition. This philosophical principle is found in all five core courses, just as each of the courses requires communication, scientific reasoning, and mathematical reasoning skills. In the statistics course, for example, students spend the first week of class discussing, and eventually writing about, what an education means to them. For a final project, students complete real research, either biological or psychological, on the people of the Islands (a virtual world) and make a presentation about their findings, which relate directly to the human condition.
 4. **Student Engagement and Responsibility:** The Honors Program nurtures and rewards the motivation of our gifted and engaged students. Although Honors students choose to enroll in a selective admissions program and pursue challenging curriculum, students blossom with the opportunity to lead discussions (be the expert for the day), present their research, and receive constructive feedback from their instructors and their equally engaged peers. For example, in the Honors Statistics, Honors Psychology, and Honors Composition courses, students choose a research topic, conduct the research, and present their findings—with minimal help or interference from the professor. Consequently, self-directed learning is integral to the process. This level of student engagement and responsibility is accessible to the majority of general education students. As with the Honors curriculum examples above, students can
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flourish in this kind of rigorous curriculum with a little more instructor-directed guidance in general classes.

5. **Time:** An interdisciplinary education requires time to collaborate, plan, implement, assess, revise, and repeat. Our institution created the Honors Program on a small scale, involving only a few very dedicated instructors and classes. To implement a program system-wide, most faculty, at least in the first semester, would need some relief from normal duties and/or teaching load to complete the arduous task of preparing new syllabi, lessons, labs, and assessments.
6. **Authentic Assessments:** For this program to work, the major assessments need to be productive. Program instructors do not advocate a complete elimination of objective testing, but most of the weight should be on authentic assessments. There are still exams to determine the students' mastery of vocabulary and concepts in the statistics course, but they only account for 30 percent of the overall grade, while the final research project and presentation account for 50 percent.

By its very nature a general education exposes students to courses from various disciplines. The explicit connections and interdisciplinary links embedded into the Honors Program courses reinforce for students how STEM disciplines are integrated with and supported by the humanities, arts, and social sciences. Honors Program courses are designed with an eye towards innovation and student engagement through a curriculum replete with applied learning projects, student-centered classes, and interdisciplinary material. Students have the opportunity to explore their personal interests and grow as independent learners, while dedicated faculty provide coaching and encouragement. The commonality of these assignments rests on the high level of critical thinking and necessary clarity in their communication skills, which remain paramount to the Honors Program objectives. While the Honors Program serves as the sandbox to develop and implement these innovations, faculty frequently find ways to bring these methodologies and assignment ideas to all our general education courses, thus creating a more robust and engaging experience for the general student population.

What are your thoughts on the integrated approach outlined above? Join the conversation in the comments below or on [Facebook](#)!

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