New Program Proposal

Date Submitted: 02/12/24 4:44 pm

Viewing: : Bachelor of Science in Data Visualization, Information, & Communication

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Changes proposed by: hringler

In Workflow

1. HUMA Chair
2. Academic Affairs
3. Undergraduate Academic Affairs
4. Director of Assessment
5. LS Dean
6. Marketing and Communications
7. Undergraduate Studies Committee Chair
8. Faculty Council Chair
9. Faculty Council Chair
10. Provost
11. President
12. Board of Trustees
13. Academic Affairs

Program Status	Active		
Requestor	Name Hannah Ringler	E-mail hringler@iit.edu	
Origination Date	2024-2-12		
Is this an interdisciplinary program?	No		
Academic Unit	Humanities	College	Lewis College of Science and Letters
Program Title	Bachelor of Science in Data Visualization, Information, & Communication		
Effective Academic Year	2024 - 2025	Effective Term	Fall 2024
Academic Level	Undergraduate		

If all courses in a subject in your department are required, please enter each subject followed by the number ranges in the "Quick Add" field in the pop up box when you click the green plus button below. For example: ARCH 100-499.

What courses will factor the major GPA?

Program Type: Degree

Degree Type: Bachelor of Science (BS)

CIP Code

09.0908 - Technical and Scientific Communication.

Is there more than one Academic Unit proposer?

No

Program Code

Program Attribute

Total Program Credit Hours 126

Program Narrative and Justification

Narrative description of how the institution determined the need for the program. For example, describe what need this program will address and how the institution became aware of that need. If the program is replacing a current program(s), identify the current program(s) that is being replaced by the new program(s) and provide details describing the benefits of the new program(s). If the program will be offered in connection with, or in response to, an initative by a governmental entity, provide details of that initiative.

Illinois Tech currently offers a B.S. in Communication: Professional and Technical Communication. However, this program has had historically low enrollment and appeal to students. The Humanities Department believes this is due to a) outdated curriculum, and b) a lack of structured curriculum which provides marketable training in this area.

This new B.S. DVIC program is designed as a replacement for the current Professional and Technical Communication degree. Over time and as technology has progressed, the field has generally moved away from “technical communication” and into areas like data visualization and information communication, which this program reflects. Moreover, it is designed to build skills in media studies, statistics, and data visualization, on top of traditional technical communication skills. These skills culminate in a capstone or thesis project, where students can engage deeply with communication practices and complexities in other fields, thus allowing students to customize their communication expertise to the unique qualities of other fields. Finally, this program allows for 40 credits of free electives, and as such, would be a marketable second major for many students.

Narrative description of how the program was designed to meet local market needs, or for an online program, regional or national market needs. For example, indicate if Bureau of Labor Statistics data or State labor data systems information was used, and/or if State, regional, or local workforce agencies were consulted. Include how the course content, program length, academic level, admission requirements, and prerequisites were decided; including information received from potential employers about course content; and information regarding the target students and employers.

Communication skills are widely regarded as incredibly important for workers in technical degree fields. Employers also regularly report communication skills as lacking by many recent graduates in engineering and related fields. In response, agencies like ABET have explicitly added communication skills to their accreditation criteria.

We believe that students who add this degree as a second major (on top of an engineering or computing-related degree) will thus enhance their marketability by highlighting not only their technical skills, but a unique dedication to communication skills which employers find important and rare. We have thus designed this program with 40 credit hours of free electives, so that students can easily add it as a second major. In addition, we have designed the requirements to be integrated with developing technical communication skills in their majors: students must engage in statistics and specialized communication-related courses (many in majors) as part of this degree program, fostering a deeper engagement between discipline and communication skills which can be explored further in the final thesis or capstone.

Narrative description of any wage analysis the institution may have performed, including any consideration of Bureau of Labor Statistics wage data related to the new program.

N/A

Narrative description of how the program was reviewed or approved by, or developed in conjunction with, one or more of the following: a) business advisory committees; b) program integrity boards; c) public or private oversight or regulatory agencies (not including the state licensing/authorization agency and accrediting agency); and d) businesses that would likely employ graduates of the program. For example, describe the steps taken to develop the program, identify when and with whom discussions were held, provide relevant details of any proposals or correspondence generated, and/or describe any process used to evaluate the program.

N/A

Admission Entry Details

Available Fall Admit	Yes	Available Spring Admit	Yes
Available Summer Admit	Yes		
Available On Campus	Yes	Available Online	No
Available Full-Time	Yes	Available Part-Time	Yes

Available	Yes		Available Domestic
International	Yes		

What are the enrollment estimates?

Year 1	10	Year 2	20	Year 3	25

Attach Additional Program Justification Document(s)

Academic Information

Advising

Since quality advising is a key component of good retention, graduation, and career placement, how will students be mentored? What student professional organizations will be formed? How will the department work with the Career Services office to develop industry connections?

• Program Committee (faculty). Responsible for the content of curriculum. Runs program assessment. Updates curriculum based on assessment results. Supports professional development activities for students on campus and works with related student organizations to help support the campus ecosystem for communication skills. This committee should have a minimum of 3 members with at least two drawn from HUM. Committee will report on program to the chair of HUM, and the dean of Lewis College.
• Program Adviser (staff). Responsible for front-line advising of students to ensure students understand degree requirements and take the necessary courses. Points students to other resources, when they need specialized or additional support. Tracks majors through graduation.

Program Resources

Which program resources are necessary to offer this program?

Proposed Bulletin Entry

Admission Requirements

This degree program has no additional admission requirements, outside of the university's standard undergraduate degree requirements.

Course Requirements

Required Courses

Foundations		**(12)**
Take each of the following courses		12
COM 424	Document Design	3
COM 421	Technical Communication	3
COM 428	Verbal and Visual Communication	3
COM 425	Editing	3
Communication and Media Studies Requirement		**(6)**
Select two courses from the following		6
COM 372	Mass Media and Society	3
COM 353	Media and Globalization	3
COM 382	Social Media and Society	3
HIST 373	History of Video Games	3
Statistics Requirement		**(3)**
Select 1 course from the following		3
PSYC 203	Undergraduate Statistics for the Behavioral Sciences	4
MATH 225	Introductory Statistics	3
MATH 425	Statistical Methods	3
MATH/CHE 426	Statistical Tools for Engineers	3
MATH 474	Probability and Statistics	3
MATH 475	Probability	3
or MATH 476	Statistics	
BUS 221	Business Statistics	3
Technical Electives		**(6)**
Select 2 courses from the following		6
COM 438	Technical Exhibit Desisgn	3
HUM 372	Interactive Storytelling	3
COM 437	Video Documentation	3
ITMD 362	Human-Computer Interaction and Web Design	3
CS 442	Mobile Applications Development	3
FDSN 320	Food Law, Labels, and Health Claims	3

INTM 301	Communications for the Workplace	3
ITM 300	Communication in the Workplace	3
PSYC 312	Human Motivation and Emotion	3
PSYC 362	Human-Computer Interaction and Web Design	3
Capstone or Thesis		**(6)**
COM 497	Special Project	6
STEM Module		**(15)**
Choose 2 credit hours of Computer Science		2
Choose 2-3 credit hours of Mathematics Some of the Core-required Math credits are fulfilled by major requirements.		3
Choose 10-11 credit hours of Natural Science or Engineering		10
Introduction to the Profession		**(2)**
LCHS 100	Introduction to the Professions	2
Interprofessional Projects (IPRO)		**(6)**
See Illinois Tech Core Curriculum, section E		6
Humanities and Social Science Requirements		**(24)**
COM 101	Writing in the University	3
or COM 111	Writing in the University for Non-Native Students	
HUM 200	Topics in Humanities	3
or HUM 202	Industrial Culture	
or HUM 204	Age of Darwin	
or HUM 206	Life Stories	
or HUM 208	Digital Culture	
or HUM 250	Introduction to Science, Technology, and Society	
Humanities (H) electives		6
Social Science (S) electives		9
(H) or (S) elective		3
Free Electives		**(40)**
Select 40 credit hours of free electives		40
Total Credit Hours		120

Program Outcomes and Assessment Process

What are the
learning goals for

this program?

Learning goal	Courses/student work used to assess achievement of this goal
Produce effective technical texts and documentation in professional and academic contexts	Artifacts from each of the Foundations courses; final projects/papers from Communication & Media Studies course
Critically evaluate the role of technical and data-driven texts in society	Capstone or thesis project; final projects/papers from Communication & Media Studies course
Draw upon theories and knowledge from statistics and design to communicate ideas clearly and effectively with data	Capstone or thesis project; final projects/papers from Communication & Media Studies course

In what semesters will the data be collected to assess this learning goal, and by whom?

Theses or capstone projects will be collected and assessed by the program committee each year. Course artifacts will be assessed every 2 years.

Faculty for the courses scheduled for assessment will be asked to collect student work (projects or exams) with which the course can be assessed, and to submit the full set of student work on those assignments for evaluation. Data analysis will be conducted by program committee.

Provide the name of the rubric that will be used to assess the extent to which students are achieving this learning goal.

The rubric is still under development, to ensure it meets best practices and accreditation guidelines. The full rubric will be developed in coordination with UPAC, and in place by Fall 2024.

How often and by whom will the data be analyzed? What benchmarks or targets will be used to interpret your results?

The program will aim for 90% or higher of artifacts to score at "satisfactory" or higher. Course assessments will be used to ensure students are gaining the fundamental skills they need to complete high-level capstone or thesis work.

Assessment results will be used to revise curriculum at the course and program level and to inform development of cocurricular supports and opportunities.

Data analysis will be conducted by program committee.

Briefly describe the process that will be used to share the results with faculty and use these to motivate program improvement.

Assessment results will be included in the annual report distributed to program faculty and relevant unit heads. The program committee will initiate and support needed curricular changes.

Attach Additional Assessment Document(s)

Undergraduate Program Requirements

What courses will factor the major GPA?

COM 421 - Technical Communication
COM 424 - Document Design
COM 428 - Verbal and Visual Communication
COM 425 - Editing
COM 372 - Mass Media and Society
COM 353 - Media and Globalization
COM 382 - Social Media and Society
HIST 373 - History of Video Games
PSYC 203 - Undergraduate Statistics for the Behavioral Sciences
MATH 225 - Introductory Statistics
MATH 425 - Statistical Methods
MATH 426 - Statistical Tools for Engineers
CHE 426 - Statistical Tools for Engineers
MATH 474 - Probability and Statistics
MATH 475 - Probability
MATH 476 - Statistics
BUS 221 - Business Statistics
COM 438 - Technical Exhibit Desisgn
HUM 372 - Interactive Storytelling
COM 437 - Video Documentation
ITMD 362 - Human-Computer Interaction and Web Design
CS 442 - Mobile Applications Development
FDSN 320 - Food Law, Labels, and Health Claims
INTM 301 - Communications for the Workplace

PSYC 312 - Human Motivation and Emotion
PSYC 362 - Human-Computer Interaction and Web Design
COM 497 - Special Project

Undergraduate Degree Requirements

Minimum credit hours 126

Specialization required?
No

Minor required?
No

Proposed General Curriculum

List Major Course Requirements

Courses required for all students

Foundations		**(12)**
COM 424	Document Design	3
COM 425	Editing	3
COM 428	Verbal and Visual Communication	3
COM 421	Technical Communication	3
Communication and Media Studies Requirement		**(6)**
Select two courses from the following		6
COM 372	Mass Media and Society	3
COM 353	Media and Globalization	3
COM 382	Social Media and Society	3
HIST 373	History of Video Games	3
Statistics Requirement		**(3)**
Select one course from the following		3
PSYC 203	Undergraduate Statistics for the Behavioral Sciences	4
MATH 225	Introductory Statistics	3
MATH 425	Statistical Methods	3
MATH 426	Statistical Tools for Engineers	3
or CHE 426	Statistical Tools for Engineers	

MATH 474	Probability and Statistics	3
MATH 475	Probability	3
or MATH 476	Statistics	
BUS 221	Business Statistics	3
Capstone or Thesis		**(6)**
COM 497	Special Project	6
Total Credit Hours		27

List Mathematics Requirements

See Illinois Tech Core Curriculum, section D

5-6 credit hours required. Students will fulfill 3-4 of these credit hours through the statistics requirement.

List Science Requirements

See Illinois Tech Core Curriculum, section D

10-11 credit hours required.

List Computer Science Requirements

See Illinois Tech Core Curriculum, section D

2 credit hours required. Some students may fulfill this with CS 442, as part of the Technical Electives requirement.

List Humanities and Social Sciences Requirements

See Illinois Tech Core Curriculum, sections B and C

24 credit hours required.

List Interprofessional Project (IPRO) Requirements

See Illinois Tech Core Curriculum, section E

6 credit hours required.

List Technical Elective Course Options

Select two courses from the following		6
COM 438	Technical Exhibit Desisgn	3
COM 437	Video Documentation	3
HUM 372	Interactive Storytelling	3
PSYC 312	Human Motivation and Emotion	3

PSYC 362	Human-Computer Interaction and Web Design	3
FDSN 320	Food Law, Labels, and Health Claims	3
CS 442	Mobile Applications Development	3
ITM 300	Communication in the Workplace	3
ITMD 362	Human-Computer Interaction and Web Design	3
INTM 301	Communications for the Workplace	3
Total Credit Hours		6

List Free Elective Credit Hours (if applicable)	40
Semester-by-semester plan of study for the degree program	

Below is a sample plan of study.

Year 1

Semester 1	Credit Hours	Semester 2	Credit Hours
LCHS 100	2	HUM 200	3
COM 101	3	MATH 425	3
Free elective	3	CS 115	2
Math elective	3	Natural Science or Engineering (N) elective	3
Natural Science or Engineering (N) elective	4	Free elective	3
	15		14

Year 2

Semester 1	Credit Hours	Semester 2	Credit Hours
COM 421	3	COM 424	3
Natural Science or Engineering (N) elective	3	COM 425	3
Free elective	3	Free elective	3
Free elective	3	Free elective	3
Free elective	3	Free elective	3
	15		15

Year 3

Semester 1	Credit Hours	Semester 2	Credit Hours
COM 428	3	COM 382	3
COM 372	3	ITMD 361	3
FDSN 320	3	IPRO 397	3
Free elective	3	Free elective	3
Free elective	3	Free elective	3

	15		15
			Year 4
Semester 1	Credit Hours	Semester 2	Credit Hours
IPRO 497	3	COM 497	3
COM 497	3	Free elective	3
Free elective	3	Free elective	3
Free elective	3	Free elective	3
Free elective	4	Free elective	3
	16		15

Total Credit Hours: 120

Reviewer Comments

Key: 634