

New Program Proposal

Date Submitted: 03/25/24 9:24 pm

Viewing: **BS-ICDV : Bachelor of Science in Information Communication & Data Visualization**

Last edit: 03/25/24 9:24 pm

Changes proposed by: hringler

| | | | |
|---------------------------------------|---|----------------|--------|
| Program Status | Active | | |
| Requestor | Name | Hannah Ringler | E-mail |
| | hringler@iit.edu | | |
| Origination Date | 2024-3-25 | | |
| Is this an interdisciplinary program? | No | | |
| Academic Unit | Humanities | | |
| College | Lewis College of Science and Letters | | |
| Program Title | Bachelor of Science in Information Communication & Data Visualization | | |
| 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?
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

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

Approval Path

1. 03/05/24 11:46 am
Matthew Bauer (bauerma): Approved for HUMA Chair
2. 03/06/24 11:16 am
Ayesha Qamer (aqamer): Rollback to Initiator

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 Design
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
COM 497 - Special Project
MAX 502 - Analytics for Decision Making
MAX 507 - Visual Analytics - Data Analytics & Visualization

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 BS-ICDV

Program Attribute

Total Program 126
Credit Hours

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 initiative 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. ICDV 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 International | Yes | | Available Domestic |
| | 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 Catalog 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 Design | 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 |
| MAX 502 | Analytics for Decision Making | 3 |
| MAX 507 | Visual Analytics - Data Analytics & Visualization | 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 <small>Some of the Core-required Math credits are fulfilled by major requirements.</small> | | 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 Multilingual Speakers of English | |
| 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?

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. Please see the attached assessment plan for details on data collection timelines.

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)

[Assessment Plan_icdv.xlsx](#)

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 Design 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 MAX 502 - Analytics for Decision Making MAX 507 - Visual Analytics - Data Analytics & Visualization |
|---|---|

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 Design | 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 |
| MAX 502 Analytics for Decision Making | 3 |
| MAX 507 Visual Analytics - Data Analytics & Visualization | 3 |
| Total Credit Hours | 6 |

List Free Elective 40
Credit Hours (if applicable)

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 |
| <u>LCHS 100</u> | 2 | <u>HUM 200</u> | 3 |
| <u>COM 101</u> | 3 | <u>MATH 425</u> | 3 |
| Free elective | 3 | <u>CS 115</u> | 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 |
| <u>COM 421</u> | 3 | <u>COM 424</u> | 3 |
| Natural Science or Engineering (N) elective | 3 | <u>COM 425</u> | 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 |
| <u>COM 428</u> | 3 | <u>COM 382</u> | 3 |
| <u>COM 372</u> | 3 | <u>ITMD 361</u> | 3 |
| <u>FDSN 320</u> | 3 | <u>IPRO 397</u> | 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 |
| <u>IPRO 497</u> | 3 | <u>COM 497</u> | 3 |
| <u>COM 497</u> | 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

Ayesha Qamer (aqamer) (03/06/24 11:09 am): 3/6/2024, AQ: Added program code at the top of the form.

Ayesha Qamer (aqamer) (03/06/24 11:16 am): Rollback: In the course requirements section, under "Stem Module", you have a footnote under "Choose 2-3 credit hours of Mathematics" which is not formatted correctly. Additionally, the total credit hours reads as 120 hours whereas the total program credit hours at the top of the form reads as 126 hours. The total credit hours need to match the total program credit hours at the top of the form. The total credit hours towards the bottom of the form under the semester by semester plan section also reads as 120 hours which do not match the top of the form. Please revise. If you need to contact me, you can reach me at: aqamer@iit.edu to request a meeting.

Key: 634