



Establish a Bachelor of Arts in Technology and Information Design (PCC 20069)

PRESENTED BY Valerie Orlando, Chair, Senate Programs, Curricula, and Courses Committee

REVIEW DATES SEC – April 09, 2021 | SENATE – April 20, 2021

VOTING METHOD In a single vote

RELEVANT POLICY/DOCUMENT N/A

NECESSARY APPROVALS Senate, President, University System of Maryland Board of Regents, and Maryland Higher Education Commission

ISSUE

The College of Information Studies proposes to establish a Bachelor of Arts in Technology and Information Design. The B.A. in Technology and Information Design (InfoDesign) will teach students to frame important problems at the intersection of people and information; to design solutions for those problems; and to realize, deploy and iterate on those solutions. InfoDesign supports students in their efforts to use technology in the service of the greater good; to apply and expand their creativity; to develop a start-up mentality (in which they must try solutions and fail first in order to succeed); and to engage in rapid development and prototyping grounded by rapid evaluation and assessment. Students participate in hands-on studio and laboratory classes in user-centered design, technology development, problem-solving and cross-disciplinary communication. Students will learn a variety of skills, including the following:

- conducting user research and participatory design
- implementing workflow design, planning and auditing
- performing algorithmic audits on machine learning processes
- creating digital materials and information visualizations
- managing and moderating community at scale
- writing and designing regulations for big data and machine learning.

The program will require 55 credits. Students take foundational courses in programming, statistics and probability, design, information science, and the sociology of social problems. Students also take upper-level courses in innovation, technology development, communication for designers, systemic problem modeling and simulation, and technology, culture and society. Students are also required to take 18 credits of upper-level electives from a selection of information studies courses. Students complete the program with a capstone course.

This program is geared towards students whose interdisciplinary interests make them a poor fit for other, disciplinarily-defined degree programs. Students who are particularly interested in technology or business may discover that they are in fact interested in the intersection between design, information, and technology. Graduates may become designers, planners, technology consultants, project managers, and entrepreneurs, in such wide-ranging fields as user experience, mobile development, healthcare, law, entertainment, policy, smart-city development, libraries and archives.

The administrative infrastructure, faculty resources, and many of the courses already exist within the College of Information Studies. Additional costs will be met through reallocations within the college.

This proposal was approved by the Senate Programs, Curricula, and Courses committee on April 2, 2021.

RECOMMENDATION(S)

The Senate Committee on Programs, Curricula, and Courses recommends that the Senate approve this bachelor's degree program.

COMMITTEE WORK

The committee considered this proposal at its on April 2, 2021. The College of Information Studies' Kate Izsak and Wayne Lutters presented the proposal and responded to questions from the committee. The committee approved the proposal

ALTERNATIVES

The Senate could decline to approve this new bachelor's degree program.

RISKS

If the Senate declines to approve this degree program, the university will lose an opportunity to provide an innovative, interdisciplinary major that prepares students for an expanding job market in information and technology design.

FINANCIAL IMPLICATIONS

The program will be funded through a reallocation of resources within the College of Information Studies.

760: TECHNOLOGY AND INFORMATION DESIGN

In Workflow

1. INFO Curriculum Manager (emilyd@umd.edu; kworboys@umd.edu)
2. INFO PCC Chair (bsbutler@umd.edu; kworboys@umd.edu)
3. INFO Dean (bsbutler@umd.edu; kworboys@umd.edu; marzullo@umd.edu)
4. Academic Affairs Curriculum Manager (mcolson@umd.edu)
5. Senate PCC Chair (mcolson@umd.edu; vorlando@umd.edu)
6. University Senate Chair (mcolson@umd.edu)
7. President (mcolson@umd.edu)
8. Board of Regents (mcolson@umd.edu)
9. MHEC (mcolson@umd.edu)
10. Provost Office (mcolson@umd.edu)
11. Undergraduate Catalog Manager (lyokoi@umd.edu; wbryan@umd.edu)

Approval Path

1. Thu, 07 Jan 2021 18:12:12 GMT
Katherine Izsak (kworboys): Approved for INFO Curriculum Manager
2. Thu, 07 Jan 2021 18:12:55 GMT
Katherine Izsak (kworboys): Approved for INFO PCC Chair
3. Thu, 07 Jan 2021 18:13:22 GMT
Katherine Izsak (kworboys): Approved for INFO Dean
4. Fri, 26 Mar 2021 21:00:40 GMT
Michael Colson (mcolson): Approved for Academic Affairs Curriculum Manager
5. Fri, 02 Apr 2021 15:04:28 GMT
Valerie Orlando (vorlando): Approved for Senate PCC Chair

New Program Proposal

Date Submitted: Thu, 07 Jan 2021 18:11:32 GMT

Viewing: 760 : Technology and Information Design

Last edit: Mon, 25 Jan 2021 23:35:54 GMT

Changes proposed by: Katherine Izsak (kworboys)

Program Name

Technology and Information Design

Program Status

Proposed

Effective Term

Fall 2021

Catalog Year

2021-2022

Program Level

Undergraduate Program

Program Type

Undergraduate Major

Delivery Method

On Campus

Departments**Department**

Information Studies

Colleges**College**

Information Studies

Degree(s) Awarded**Degree Awarded**

Bachelor of Arts

Proposal Contact

Kate Izsak, kworboys@umd.edu

Proposal Summary

We propose the creation of a B.A. in Technology and Information Design within the College of Information Studies (iSchool). The B.A. in Technology and Information Design (InfoDesign) teaches students to frame important problems at the intersection of people and information; to design solutions for those problems; and to realize, deploy and iterate on those solutions. Graduates may become designers, planners, technology consultants, project managers, and entrepreneurs, in such wide-ranging fields as user experience, mobile development, healthcare, law, entertainment, policy, smart-city development, libraries and archives.

(PCC Log Number 20069)

Program and Catalog Information

Provide the catalog description of the proposed program. As part of the description, please indicate any areas of concentration or specializations that will be offered.

The B.A. in Technology and Information Design (InfoDesign) teaches students to frame important problems at the intersection of people and information; to design solutions for those problems; and to realize, deploy and iterate on those solutions. InfoDesign supports students in their efforts to use technology in the service of the greater good; to apply and expand their creativity; to develop a start-up mentality (in which they must try solutions and fail first in order to succeed); and to engage in rapid development and prototyping grounded by rapid evaluation and assessment. Students participate in hands-on studio and laboratory classes in user-centered design, technology development, problem-solving and cross-disciplinary communication. Graduates may become designers, planners, technology consultants, project managers, and entrepreneurs, in such wide-ranging fields as user experience, mobile development, healthcare, law, entertainment, policy, smart-city development, libraries and archives.

Catalog Program Requirements:

| Course | Title | Credits |
|------------------------|--|-----------|
| Core Courses | | |
| INST104 | Course INST104 Not Found (Design Across Campus) | 3 |
| INST126 | Introduction to Programming for Information Science | 3 |
| IDEA258 | Special Topics in Innovation (IDEA258A Becoming a Design Thinker: Tools and Mindsets for Innovation) | 1 |
| INST201 | Introduction to Information Science | 3 |
| SOCY105 | Introduction to Contemporary Social Problems | 3 |
| STAT100 | Elementary Statistics and Probability | 3 |
| INST204 | Course INST204 Not Found (Designing Fair Systems) | 3 |
| PLCY380 | Innovation and Social Change: Do Good Now (Innovation and Social Change: Do Good Now) | 3 |
| INST367 | Course INST367 Not Found (Prototyping and Development Technologies Studio) | 3 |
| INST406 | Course INST406 Not Found (Cross-disciplinary Design Communication Lab) | 3 |
| INST454 | Course INST454 Not Found (Modeling and Simulating Systemic Problems) | 3 |
| INST466 | Technology, Culture, and Society | 3 |
| INST491 | Course INST491 Not Found (Integrated Capstone for Technology and Information Design) | 3 |
| Major Electives | | 18 |
| INST311 | Information Organization | |
| INST352 | Information User Needs and Assessment | |

| | |
|---------|--|
| INST366 | Privacy, Security and Ethics for Big Data |
| INST401 | Design and Human Disability and Aging |
| INST402 | Designing Patient-Centered Technologies |
| INST404 | Course INST404 Not Found (Youth Experience Design Studio) |
| INST405 | Course INST405 Not Found (Game Design Studio) |
| INST441 | Information Ethics and Policy |
| INST460 | Course INST460 Not Found (Video Games as Emergent Experiences) |
| INST463 | Course INST463 Not Found (AI and Society) |

Additional elective courses may be added to this list upon approval by the Technology and Information Design program committee.

Total Credits

55

Benchmark courses (16 credits)

Failure to complete both sets of benchmark courses within the timeline indicated below may result in dismissal from the program.

Benchmark I - The below courses must be completed with a C- or higher within the first two semesters of the program:

- INST104 Design Across Campus (3). Explores different design meanings and methodologies in various disciplines through modules created by faculty members in INFO, ARCH, ARHU, BSOS, CMNS and ENGR. (NEW)
- INST126 Introduction to Programming for Information Science (3). An introduction to computer programming for students with very limited or no previous programming experience. Topics include fundamental programming concepts such as variables, data types, assignments, arrays, conditionals, loops, functions, and I/O operations.
 - Minimum grade of C- in MATH115 (<https://academiccatalog.umd.edu/search/?P=MATH115>); or must have math eligibility of MATH140 (<https://academiccatalog.umd.edu/search/?P=MATH140>) or higher
- IDEA258 Becoming a Design Thinker: Tools and Mindsets for Innovation (1). Boost your creative confidence. Unleash your inner design thinker. Learn how to see the world like a designer. Become an idea-generating machine by embracing methods and mindset that bolster creativity and lead to innovation in this 1-credit course open to all majors. You'll only pass if you learn how to fail.

Benchmark II - The below courses must be completed with a C- or higher within the first three semesters of the program:

- INST201 Introduction to Information Science (3). Examining the effects of new information technologies on how we conduct business, interact with friends, and go through our daily lives. Understanding how technical and social factors have influenced the evolution of information society. Evaluating the transformative power of information in education, policy, and entertainment, and the dark side of these changes.
- SOCY105 Introduction to Contemporary Social Problems (3). An examination of contemporary social problems through sociological perspectives; ways in which social problems are part of the organization of society; a detailed study of selected social problems including social conflict and social inequality.
- STAT100 Elementary Statistics and Probability (3). Simplest tests of statistical hypotheses; applications to before-and-after and matched pair studies. Events, probability, combinations, independence. Binomial probabilities, confidence limits. Random variables, expected values, median, variance. Tests based on ranks. Law of large numbers, normal approximation. Estimates of mean and variance.
 - MATH110 (<https://academiccatalog.umd.edu/search/?P=MATH110>), MATH112, MATH113 (<https://academiccatalog.umd.edu/search/?P=MATH113>), or MATH115 (<https://academiccatalog.umd.edu/search/?P=MATH115>); or permission of CMNS-Mathematics department; or must have math eligibility of STAT100 (<https://academiccatalog.umd.edu/search/?P=STAT100>) or higher

Major core courses (21 credits):

- INST204 Designing Fair Systems (3). Explores how policy shapes design and how design can act as de facto policy. Introduces students to interdisciplinary research on fairness, accountability, transparency, and justice in technical systems, bringing together fields such as law, computer science, and political theory. Students will learn how to assess the impact of automated decision-making in domains such as criminal justice and transportation, conduct audits of these systems, and re-design them for increased community input. (NEW)
 - Minimum grade of C- in INST104 and IDEA258
- PLCY388D Innovation and Social Change: Do Good Now (3). Introduces students to the concept of social innovation while exploring the many mechanisms for achieving social impact. It is team-based, highly interactive and dynamic, and provides an opportunity for students to generate solutions to a wide range of problems facing many communities today. Deepens students' understanding of entrepreneurship and innovation practices by guiding them through the creation and implementation process as applied to a project idea of their choice.
- INST367 Prototyping and Development Technologies Studio (3). Builds upon students' experiences with interaction design to develop a deeper understanding of the process of defining, iterating, developing, and researching products. When interacting with systems, people build expectations and mental models of how things work, based upon their previous experience with similar products or processes, and the successful or unsuccessful nature of their interactions determines the success of the design. This studio course is about how to build a product that people find usable, useful, and desirable, and conduct research throughout that building process from contextual inquiry to evaluating the final product. (NEW)
 - Minimum grade of C- in PLCY388D and minimum grade of C- in INST362

- INST406 Cross-disciplinary Design Communication Lab (3). Best practices of writing and sketching for designers. Students learn how to solicit needs from clients and other stakeholders; how to craft proposals, be they technical or process-oriented; how to create visually compelling documents; and how to present written analyses for audiences of varying levels of expertise. (NEW)
 - Minimum grade of C- in PLCY388D and minimum grade of C- in Professional Writing General Education requirement
- INST454 Modeling and Simulating Systemic Problems (3). Growing complexities in organizations and societies have brought about systemic problems that cannot be fully understood and addressed using solely traditional linear approaches, and purely local solutions limited to a single organization. This course explores paradigms, methods and tools for articulating complex, non-linear, feedback-driven relationships in a range of socio-technical systems, which may span distributed organizations and other social structures, through formal models. Those models can then be simulated to identify the root causes of the systemic problems present, and develop solution strategies for addressing those problems. (NEW)
 - Minimum grade of C- from STAT100; 1 minimum grade of C- from (INST201, INST301); 1 minimum grade of C- from (SOCY105, PSYC100); must be in Technology and Information Design or Information Science programs
 - Note: requires update in prerequisite information tagged to existing course
- INST466 Technology, Culture and Society (3). Individual, cultural, and societal outcomes associated with development of information & communication technologies (ICTs), including pro- and anti-social factors. Unpacking how gender, race, ethnicity, sexual orientation, disabilities, and political affiliations affect consumption and production of online experiences. Unpacking how structures of dominance, power and privilege manifest at individual, institutional and cultural levels. Understanding the relationship between local and global problems in technology development. Comparing global and historical variation in the design, deployment, use and regulation of technology.
 - 1 minimum grade of C- from (INST201, INST301); 1 minimum grade of C- from (PSYC100, SOCY105); must be in the Information Science or Technology and Information Design programs
 - Note: requires update in prerequisite information tagged to existing course
- INST491 Integrated Capstone for Technology and Information Design (3). Capstone course for the major. Students collaborate in teams on a second semester-long project for a real-world client, bringing together lessons from across the Technology and Information Design curriculum in order to frame the client's problems, design a solution to them, and realize the solution in context. Students apply knowledge they have gained in the program to work with clients to craft design proposals, conduct user and system analyses, and review project successes and failures. (NEW but based on existing INST490)
 - Minimum grade of C- in: INST104, INST126, STAT100, IDEA258, SOCY105, INST201 or INST301, INST204, INST311, INST 357, INST362, INST 406, INST 454, INST466

Major elective options (students will choose 18 credits):

- INST311 Information Organization (3). Examines the theories, concepts, and principles of information, information representation and organization, record structures, description, and classification. Topics to be covered in this course include the methods and strategies to develop systems for storage, organization, and retrieval of information in a variety of organizational and institutional settings, as well as policy, ethical, and social implications of these systems.
 - Must be in the Technology and Information Design or Information Science programs
 - Note: requires update in prerequisite information tagged to existing course
- INST352 Information User Needs and Assessment (3). Focuses on use of information by individuals, including the theories, concepts, and principles of information, information behavior and mental models. Methods for determining information behavior and user needs, including accessibility issues will be examined and strategies for using information technology to support individual users and their specific needs will be explored.
 - 1 course with a minimum grade of C- from (INST201, INST301); minimum grade of C- in INST311
- INST366 Privacy, Security and Ethics for Big Data (3). Evaluates major privacy and security questions raised by big data, Internet of Things (IoT), wearables, ubiquitous sensing, social sharing platforms, and other AI-driven systems. Covers history of research ethics and considers how ethical frameworks can and should be applied to digital data.
 - 1 minimum grade of C- from (INST201, INST301)
- INST401 Design and Human Disability and Aging (3). Focuses on the design of consumer products and information systems to enable their use by persons with a wider range of physical, sensory, and cognitive abilities. Overviews aging and major types of impairment as they relate to resulting problems using consumer products and information systems. Focuses on principles of design of mass market products.
 - Minimum grade of C- from (INST362, INST367)
 - Note: requires update in prerequisite information tagged to existing course
- INST402 Designing Patient-Centered Technology (3). What does it mean to design a human-centered digital health technology specifically for patients? What are the methods we can use to gather design considerations, and how to use the findings to inform the design? Through a combination of project- and lecture-based class, students will learn topics such as Patient-Centered Technology; Co-Design; Health Monitoring; Persuasive System Design; Goal Setting & Gamification; Health Literacy, and Patient-Clinician Communication. We will apply these concepts to support the unique needs of older adults and patients with a variety of conditions (e.g., diabetes, stroke, dietary issues, enigmatic disease), and to support an individual's health and well-being.

- Minimum grade of C- from (INST362, INST367)
 - Note: requires update in prerequisite information tagged to existing course
- INST404 Youth Experience Design Studio (3). Explores historical, organizational and contemporary contexts for formal and informal learning spaces, principles of teaching and learning, and information literacy. Students will use methods of design thinking specifically in and for youth contexts, including user-centered design, understanding user needs, ideation, contextual design, participatory design, iterative prototyping and visual design. (NEW)
 - Minimum grade of C- from (INST362, INST367)
- INST405 Game Design Studio (3). Games are a structured form of play that are typically undertaken for recreational—but sometimes also educational and even professional—purposes. But what constitutes a successful game? In this course, you will learn the fundamentals of game design: applying elements and principles of game design, such as goals, rules, and challenges to create games, such as board games, card games, and digital games. You will be introduced to the basic tools and methods of game design: paper and digital prototyping, design iteration, design critique, and user testing. As part of the course, you will be designing and remixing several games of different types, each which you will be able to add to your growing portfolio of game design concepts. (NEW)
 - Minimum grade of C- from (INST362, INST367)
- INST441 Information Ethics and Policy (3). Explores via case studies the legal, ethical, and technological challenges in developing and implementing policies for managing digital assets and information. Emphasizes access questions pertinent to managing sensitive information and the roles and responsibilities of information professionals.
 - 1 minimum grade of C- from (INST341, PLCY388D)
 - Note: requires update in prerequisite information tagged to existing course
- INST460 Video Games as Emergent Experiences (3). Videogames are designed objects that players bring their own history to, resulting each time in a unique emergent experience. If you've ever wondered why you love a certain game but others hate it, why you prefer one genre of game over another, or why the frustration you feel in complicated games is often actually enjoyable, this is the class for you! We will examine design principles instantiated in various games, analyze how failure and feedback support productive gameplay, discuss how mechanics and aesthetics contribute to emergent experiences, and develop an understanding of the field of games scholarship.
- INST463 AI and Society (3). Reviews the technical, legal, and business history of artificial intelligence, and contemporary deployments in domains such as hiring, health, policing, and advertising. Students will discuss both high-level ethical issues and concrete policy dilemmas related to, e.g., self-driving cars, and compare their impact in different social and geographic settings. Students will conduct independent research on the design, testing, deployment, and assessment of AI technologies.

Additional elective courses may be added to this list upon approval by the Technology and Information Design program committee.

Sample plan. Provide a term by term sample plan that shows how a hypothetical student would progress through the program to completion. It should be clear the length of time it will take for a typical student to graduate. For undergraduate programs, this should be the four-year plan.

Sample Freshman Course Plan (starting at 0 credits):

Freshman Fall:

IDEA258 Becoming a Design Thinker

INST104 Design Across Campus

Freshman Spring:

INST126 Introduction to Programming for Information Science

STAT100 Elementary Statistics and Probability

SOCY105 Introduction to Contemporary Problems

Sophomore Fall

INST201 Introduction to Information Science

INST204 Designing Fair Systems

Sophomore Spring

PLCY388D Innovation and Social Change

Junior Fall

INST406 Cross-Disciplinary Communication Lab

Junior Spring

INST367 Prototyping and Development Studio

Senior Fall

INST454 Modeling and Simulating Systemic Problems

INST466 Technology, Culture and Society

Senior Spring

INST 491 Integrated Capstone

+18 credits of electives

List the intended student learning outcomes. In an attachment, provide the plan for assessing these outcomes.

Learning Outcomes

Student will be able to:

LO1: Frame important problems at the intersection of people and information

- LO1sub1: Analyze the interplay of people, information, and technology at various scales (e.g., individuals or small groups, communities or organizations, regions or institutions)

- LO1sub2: Leverage a systems-thinking approach through modeling and simulation

- LO1sub3: Design solutions for these problems

LO2: Implement design thinking skills, including user research, ideation, prototyping, and participatory design

- LO2sub1: Communicate ideas to gather momentum and iterate through sketching, prototyping and data visualization

- LO2sub2: Iteratively assemble existing components to form new solutions within a supportive culture of critique

- LO2sub3: Attend to the ethical and equitable implications of their designs

LO3: Realize, deploy, and iterate on these solutions at appropriately selected scale(s)

- LO3sub1: Assess the scale of the problem and the appropriate deployment of potential solutions

- LO3sub2: Organize people to properly implement solutions through leadership and entrepreneurship skills

- LO3sub3: Evaluate success of a solution in a socially embedded setting, to include the employment of skills such as testing, evaluation, and auditing

The iSchool is developing a set of metrics that will be used to monitor, evaluate, and continually improve the quality of the program. The metrics are based on our shared vision of high standards for the entire learning experience at the iSchool and include standards for the courses and activities, faculty effectiveness, and administrative and technical support services for students. Faculty and content designers will use these metrics to guide the development and any necessary revisions of each course.

The assessment strategies will include direct measures of student learning, such as evaluation of students' performance in integrative design studio courses by supervisors and instructors based upon stated program objectives; the evaluation of students' portfolios; internal and external reviews of studio projects; and performance on examinations given in foundational core and specialization courses. Indirect measures will include job placement data; surveys of graduates and employers; exit interviews; and satisfaction surveys. A curriculum map is attached, indicating which courses will be assessed for which outcomes.

The degree to which InfoDesign is meeting its goals will be assessed by a process that is consistent with that outlined in the UMD Undergraduate Program Learning Outcomes Assessment Plan. The Undergraduate Program Committee will direct the assessment process. Assessments will be conducted annually in the spring semester, beginning in the first year of the program. The assessment report to the Provost each fall will include the results of the assessment and recommendations for program improvement that are based on these results.

Program review will be carried out according to the University of Maryland's policy for Periodic Review of Academic Units, which includes a review of the academic programs offered by, and the research and administration of, the academic unit (<http://www.president.umd.edu/policies/2014-i-600a.html>). Program Review is also monitored following the guidelines of the campus-wide cycle of Learning Outcomes Assessment (<https://www.irpa.umd.edu/Assessment/LOA.html>). The iSchool faculty are reviewed according to the University's Policy on Periodic Evaluation of Faculty Performance (<http://www.president.umd.edu/policies/2014-ii-120a.html>).

Please see Appendix II for a curriculum map that further indicates how we will assess each outcome. Please see Appendix III for a curriculum map aligning InfoDesign with the Washington CoLAB microcredentials. Students graduating from InfoDesign will be eligible for the Digital Generalist and Data Analytics Specialist credentials.

New Program Information

Mission and Purpose

Describe the program and explain how it fits the institutional mission statement and planning priorities.

The UMD mission statement includes a desire to create a climate of intellectual growth and mutual respect, that addresses policy issues critical to the state, nation, and world, that sits at the forefront of multi-disciplinary knowledge, and that improves student learning and success through expanded use of innovative teaching methods and opportunities for collaboration and engagement. The iSchool vision statement reads, "We envision a world... where information and technology can be fully leveraged to solve real world problems and foster a culture of trust and respect." The iSchool mission is to use our groundbreaking and innovative research and academics to strengthen information institutions, foster responsible information use, increase information reliability, and ensure equitable access to information.

In support of these goals, InfoDesign will teach students to wield technology in the service of the greater good; to apply and expand their creativity; to approach life and work with a start-up mentality, in which they must try solutions and fail first in order to succeed; to see opportunities for innovation amidst grand challenges; and to engage in rapid development and prototyping and subsequently conduct rapid evaluation and assessment efforts to make their ideas real. The major will teach students the importance of developing a deep understanding of people, places and communities and understanding the dynamics of people, information and technology at the micro, meso and macro scales. Graduates may become user

experience designers, planners, technology consultants, project managers, and entrepreneurs, in such wide-ranging fields as user experience, mobile development, healthcare, law, entertainment, policy, smart-city development, libraries and archives.

Program Characteristics

What are the educational objectives of the program?

This program aims to create and support passionate students with critical thinking skills, optimism, and a desire to spend a lifetime working for the global good. Graduates will know how to design in a way that integrates considerations of people, technology, and institutions. Graduates will know how to design, reason, and act in circumstances with high levels of uncertainty, thus preparing them to respond to grand challenges with long and noisy feedback loops. They will be able to function in complex environments and work across many levels of analysis, because grand challenges typically require integrated efforts across many interlocking levels of a problem. These students will graduate with the ability to:

- Conduct user research and participatory design;
- Apply skills in workflow design, planning, and auditing;
- Perform algorithmic audits to ensure fair, accountable, and transparent machine learning processes;
- Create digital materials and information visualizations with a focus on presenting information in a way that is useful, meaningful and persistent for non-experts;
- Manage and moderate community at scale, whether for hundreds of people in a forum, or for billions;
- Write legislation and design regulations for big data and machine learning while collaborating with domain experts in affected areas, such as health, labor, and criminal justice;
- Understand the local and global needs of distributed organizations;
- Engage wicked problems and grand challenges by identifying or creating opportunities for progress, imagining feasible, impactful and appropriate solutions, and anticipating and participating in the implementation of solutions.

The program will serve and create students who might otherwise fall between the cracks of traditional academic disciplines. These students might be interested in the skills taught in business but feel like their values are mismatched with finance or accounting majors. They might be interested in the content knowledge taught in communications but be looking for a deeper engagement with technology. They might be fascinated by policy but want to simultaneously pursue a career of hands-on making. They might be arts students looking for a professional trajectory beyond that strictly defined by their own media. They might be education students who want to design alternatives to the traditional approaches to teaching and learning. And they might be information or computer science students who are looking for more focus on creativity, design and aesthetics.

Describe any selective admissions policy or special criteria for students interested in this program.

N/A

Summarize the factors that were considered in developing the proposed curriculum (such as recommendations of advisory or other groups, articulated workforce needs, standards set by disciplinary associations or specialized-accrediting groups, etc.).

In 2018, iSchool faculty and administrative leaders worked with the iSchool Leadership, Entrepreneurship, Advocacy and Development (iLead) advisory group, made up of distinguished professionals in the information science field, to identify a set of challenges they expected to shape iSchool education in the coming years. Some of their suggestions included the need for students who would be able to:

- Offset the job displacement resulting from AI, Internet of Things (IoT) and other emerging technologies;
- Grapple with life and work changes arising from AI and robotic automation;
- Foster entrepreneurship in small communities and among underrepresented groups; and
- Gather and analyze impact data.

Building on these recommendations, a 2019 group of iSchool faculty came together to engage in a design fiction exercise in relation to a second-generation iSchool undergraduate major. Design fiction is a design practice aimed at exploring and criticizing possible futures by creating speculative scenarios—in this case, they asked, how will the world be better because of the creation of a new iSchool major? The collaborative process identified an additional series of needs for the future of iSchool education:

- More engaging news across multiple media;
- Jobs that balance equity and productivity;
- Technology professionals who understand their organization and its ethical and political impact;
- Citizens who understand the platforms that govern their finances, social networks and news consumption and understand how to demand changes of them; and
- A federal “data regulator,” a monitoring body doing the work for big data that the FDA does for food and drugs.

Identify specific actions and strategies that will be utilized to recruit and retain a diverse student body.

The iSchool is dedicated to supporting gender and ethnic diversity as well as those working for organizations that support and advocate for underrepresented groups. Over one-third of our undergraduate students are from diverse ethnic backgrounds – traditionally underrepresented in STEM fields. Currently, the iSchool sponsors the iDiversity Student Group and the iSchool Student of Color Collective, both of which are dedicated to promoting awareness of diversity, inclusivity, and accessibility within the information professions and supporting BIPOC students in the field. Undergraduate students from underrepresented groups are also supported through affinity group spaces/events such as the Black InfoSci Student Social offered every semester, and student-driven groups like the Ladies in Tech Group at the Shady Grove campus.

Also important, the iSchool’s educators and scholars serve as powerful thought leaders in anti-racism scholarship. An example is the TRACE Research and Development Center, which is a pioneer in the field of technology and disability and which applies engineering, computer science, disability

studies, public policy, and information science to prevent barriers to information and telecommunication technologies, with a stated goal of a “world that is accessible and usable by people of all ages and all abilities.” And the program itself is grounded in the importance of applying DEI principles across the curriculum. InfoDesign courses include content important in understanding diversity issues including serving underrepresented groups and institutions, meeting unique needs for diversity promotion, and developing capacity in all sizes and types of organizations. The College has also implemented TerrapinSTRONG onboarding for all new undergraduates and has programs aimed at helping faculty members build more DEI content into their courses, for example, the Anti-Black Racism Teaching Symposium, which funds faculty members to include DEI principles in courses across iSchool curricula.

Relationship to Other Units or Institutions

If a required or recommended course is offered by another department, discuss how the additional students will not unduly burden that department's faculty and resources. Discuss any other potential impacts on another department, such as academic content that may significantly overlap with existing programs. Use space below for any comments. Otherwise, attach supporting correspondence.

Letters from Mathematics, Sociology, Public Policy, and the Academy for Innovation and Entrepreneurship are attached. Please see Appendix IV.

Accreditation and Licensure. Will the program need to be accredited? If so, indicate the accrediting agency. Also, indicate if students will expect to be licensed or certified in order to engage in or be successful in the program's target occupation.

N/A

Describe any cooperative arrangements with other institutions or organizations that will be important for the success of this program.

As described in the attached letters of support, the iSchool is working with the School of Public Policy, the Academy for Innovation and Entrepreneurship, and the Departments of Mathematics and Sociology to offer both benchmark and core courses in the InfoDesign program.

Faculty and Organization

Who will provide academic direction and oversight for the program? In an attachment, please indicate the faculty involved in the program. Include their titles, credentials, and courses they may teach for the program.

All courses in the program will be taught by regular, full-time faculty or part-time faculty who have been approved for teaching by the Appointment, Promotion, and Tenure (APT) Committee of the iSchool. Regular, full-time College Park faculty will teach a high proportion of the courses and the majority of the tenured and tenure/track faculty will participate in the creation of courses and delivery of the program. Approximately half of the current faculty will play a significant role in the development of the curriculum and expect to teach program courses. Information about the credentials of these faculty members may be found in Appendix II. The iSchool's website (<http://ischool.umd.edu/fac-staff>) provides information about all faculty members in the College. Please see Appendix I for a list of faculty members with relevant expertise.

Indicate who will provide the administrative coordination for the program

The program will be managed by a Faculty Director, who will be appointed by the Dean for a three-year term and may be reappointed. The Faculty Director, in collaboration with the Assistant and Associate Deans, academic administrators, and members of the faculty, will provide intellectual leadership for the proposed major. The Faculty Director will chair a curricular committee to provide faculty oversight of academic and pedagogical strategies, policies for student recruitment, and curricular planning for the major.

Resource Needs and Sources

Each new program is required to have a library assessment prepared by the University Libraries in order to determine any new library resources that may be required. This assessment must be done by the University Libraries. Add as an attachment.

Attached. Please see Appendix VI.

Discuss the adequacy of physical facilities, infrastructure and instructional equipment.

Existing iSchool facilities and instructional resources will be used to deliver this program with plans for several additions:

- A design is in development for a comprehensive community space for the iSchool, including and beyond undergraduates in this program. This design, codenamed TinkerTech, includes six separate but interconnected spaces: a studio space outfitted with digital media (e.g. videogames, virtual and augmented reality experiences, etc.); another studio space outfitted with the technology needed to develop such digital media, directly connected so that students can transition easily between developing and playtesting; a computer lab with computers as well as spaces for laptops; a break room with board games, tables, and comfortable chairs; a small makerspace for developing physical components of digital systems; and office spaces for faculty and graduate students to increase availability to students. TinkerTech will provide easy access to expensive software, technology, and tools, and the space to collaboratively design, test, and iterate new digital and physical media.

- The College is building studio-friendly classrooms and team workspaces as it expands into more of the ground floor of Hornbake.

- The program will also explore possibilities for the use of new education technologies like PeerStudio, which is currently in use at the UC San Diego design lab, and which aims to scale up design instruction through carefully scaffolded peer feedback.

Discuss the instructional resources (faculty, staff, and teaching assistants) that will be needed to cover new courses or needed additional sections of existing courses to be taught. Indicate the source of resources for covering these costs.

This program will require the appointment of a Faculty Director, to be selected from the pool of existing iSchool faculty members. Existing iSchool faculty members will teach courses, and TA positions will be filled by the growing number of students in iSchool graduate programs. We do not anticipate that this program will result in an overall increase in campus enrollment at College Park, but that enrollment would represent a shift from other degree programs. As a result, no new tuition revenue is assumed. Resources for delivering the program will come from internal reallocation from the Office of the Provost and from the iSchool, depending on program growth.

Discuss the administrative and advising resources that will be needed for the program. Indicate the source of resources for covering these costs.

Existing administrative and advising resources will be used to oversee and support the program. These resources include a Director of Undergraduate Operations, a team of undergraduate advisors, and two coordinators. The College will hire an advisor in Spring 2022 to support the new major, and will hire additional advisors at each point that the program grows by 200-250 students. Resources for delivering the program will come from internal reallocation from the Office of the Provost and from the iSchool, depending on program growth.

Use the Maryland Higher Education Commission (MHEC) commission financial tables to describe the program's financial plan for the next five years. See help bubble for financial table template. Use space below for any additional comments on program funding.

Attached. Please see Appendix V.

Implications for the State (Additional Information Required by MHEC and the Board of Regents)

Explain how there is a compelling regional or statewide need for the program. Argument for need may be based on the need for the advancement of knowledge and/or societal needs, including the need for “expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education.” Also, explain how need is consistent with the Maryland State Plan for Postsecondary Education (<https://mhec.state.md.us/About/Documents/2017.2021%20Maryland%20State%20Plan%20for%20Higher%20Education.pdf>).

There is a regional, statewide, and national need for this program. In particular, the program will advance technology-based knowledge about information and design, and contribute specifically to a societal need for students and citizens who are well informed and trained to contribute to our rapidly changing world. This program addresses three components within the Maryland State Plan for Postsecondary Education: increasing retention and graduation rates; continuing Maryland's reputation for higher education innovation; and supporting students in their career paths towards well-paying and highly skilled positions.

First, this degree program is geared towards students whose interdisciplinary interests make them a poor fit for other, disciplinarily-defined degree programs (as discussed above). Students who begin their undergraduate degree believing that they are particularly interested in computer science, business, or education (for example), may discover that they are in fact interested in the intersection between design, information, and technology. By having this degree program available for such students - and, in fact, designed specifically to support such students - we will increase the likelihood of retention and graduation.

Second, as the Secretary notes in his opening to the Maryland State Plan, Maryland is well known for its quality of higher education, and its reputation as “the most innovative state in the nation.” This degree program - the first of its kind in Maryland, and one of very few across the nation - will advance both. In particular, we have developed an innovative education program that will graduate students who are well placed in a high demand industry (see below for projected rates of growth).

Third, as part of the “student success with less debt” goal, we are providing alternative education trajectories for students partially through their undergraduate experience, which lessens the likelihood that they will leave with debt and without a degree. Furthermore, the market demand for the primary skills this degree will provide ensures that our graduates will have access to well-paying jobs that assist in rapidly paying down any student debts that they accrue.

Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program. Possible sources of information include industry or disciplinary studies on job market, the USBLS Occupational Outlook Handbook (<https://www.bls.gov/ooh/>), or Maryland state Occupational and Industry Projections (<http://www.dlir.state.md.us/lmi/iandoproj/>) over the next five years. Also, provide information on the existing supply of graduates in similar programs in the state (use MHEC's Office of Research and Policy Analysis webpage (<http://mhec.maryland.gov/publications/Pages/research/>) for Annual Reports on Enrollment by Program) and discuss how future demand for graduates will exceed the existing supply. As part of this analysis, indicate the anticipated number of students your program will graduate per year at steady state.

The USBLS Occupational Outlook Handbook shows a projected rate of growth of 12% from 2018 to 2028 in Computer and Information Technology Occupations (CITO), and note that this rate of growth is “much faster than the average for all occupations.” Within CITO, there are two subcategories that are a particularly good fit for graduates of this degree program: Computer and Information Research Scientists; and Web Developers. The increase projection for Computer and Information Research Scientists is 16%, and USBLS notes that such scientists “are likely to enjoy excellent job prospects, because many companies report difficulties finding these highly skilled workers.” The increase projection for Web Developers is 13%, and driven specifically by the “growing popularity of mobile devices and ecommerce.”

Within Arts and Design Occupations, Graphic Designers is the only relevant occupation. Graphic Designers are only projected to increase 3%, less than average. USBLS notes that Graphic Designers face challenges on the market - we anticipate that the focus on information and technology will set our graduates apart.

Last but not least, within Business and Financial Occupations, the career of Management Analysts (also known as Business Analysts or Process Consultants) is an apt fit, and projected to increase 14%. USBLS notes that “demand for the services of these workers should grow as organizations continue to seek ways to improve efficiency and control costs.”

Currently, there are no similar programs in the state (see below), and consequently we expect the fast increase in demand to continue exceeding the existing supply of skilled workers, making this degree program a crucial contributor to industry and society. We anticipate 80 students graduating per year, beginning three years after implementation of this degree.

Please note, however, that our facilities and teaching resources can scale to accommodate larger numbers of students, if they become interested. For evidence of this, please refer to our success in quickly expanding the scope of the B.S. in Information Science, for which we expected 300 students, but which, after a few years, is currently housing more than 1300 students.

Identify similar programs in the state. Discuss any differences between the proposed program and existing programs. Explain how your program will not result in an unreasonable duplication of an existing program (you can base this argument on program differences or market demand for graduates). The MHEC website can be used to find academic programs operating in the state: http://mhec.maryland.gov/institutions_training/pages/HEPrograms.aspx

Creation of InfoDesign will not result in unreasonable duplication of an existing program within the state. Programs in the area with some curricular similarity to InfoDesign fall into two categories, more or less: 1) those with a business or entrepreneurship focus; and 2) those with a fine arts and physical design focus. As will be discussed further below, these programs represent pieces of the new proposed major, but not the overall curriculum or the innovative combination of skills and content proposed therein.

Morgan State and Mount Saint Mary's offer programs in entrepreneurship that have some overlap with InfoDesign. But Morgan State's major in Entrepreneurship is housed within their business school and is heavily focused on skills like commercialization, customer identification and validation, business plan development and intellectual property protection. The Morgan State program therefore does not have the emphasis on design and creativity emphasized in InfoDesign. Mount Saint Mary's Entrepreneurship is similar in construction, with emphasis on skills like financial management, small business development, business plan design, and social media and marketing. InfoDesign will include some emphasis on these types of skills, but they will be integrated with the discussion of design principles. The University of Maryland, Baltimore County (UMBC) offers an Entrepreneurship minor and supporting coursework most closely aligned with the computer science and information systems undergraduate programs in the College of Engineering and Information Technology. This is a supplementary, not stand-alone, program that does not have a dedicated design focus.

The Maryland Institute College of Arts (MICA) offers a BFA in Interactive Arts, which shares some similarities to InfoDesign. Focused on “crafting interactions across an array of media and forms,” however, the Interactive Arts program more narrowly emphasizes human-computer interaction, with specific attention to technologies such as P2P/Blockchain, Artificial Intelligence (AI), and Virtual Reality/Augmented Reality (VR/AR). Students are focused on coding and immersive media, rather than the broader cycle of iterative design that underpins InfoDesign. Students in the MICA program also take a first year of fundamentals in fine arts, making the program inaccessible to students not interested in developing traditional drawing and color theory skills. MICA also offers a Game Design concentration (similar to a minor) that teaches design skills, but again, specifically within a narrow focus, and it is only 15 credits. The University of Baltimore offers a similar program, a B.A. in Simulation and Game Design, which focuses primarily on coding skills, without discussion of design principles applied to broader subject matter.

Much closer to InfoDesign is MICA's Product Design BFA. The Product Design program is a hands-on curriculum focused on reimagining objects and inventing new ones through the same type of ethical values and iterative design processes that underpin InfoDesign. The Product Design BFA, however, is focused on the design of physical objects, rather than the proposed major's broader focus, which includes design of intangible products, as well. Like the Interactive Arts program, the Product Design program is also only open to fine arts students who take a first year of fundamentals in fine arts, making the program inaccessible to students not interested in developing traditional drawing and color theory skills.

While not in Maryland, Virginia Tech could prove to be a relatively local competitor to InfoDesign with its B.S. in Industrial Design or its BFA in Creative Technologies. However, the Industrial Design program is constructed similarly to MICA's Product Design program, which focuses on the creation of tangible objects. And the Creative Technology program focuses on design within the limited scope of digital and new media technologies.

Discuss the possible impact on Historically Black Institutions (HBIs) in the state. Will the program affect any existing programs at Maryland HBIs? Will the program impact the uniqueness or identity of a Maryland HBI?

Because there is no analogue to the program in the state, the creation of the proposed major will not impact the identity of a Historically Black Institution.

Supporting Documents

Attachments

InfoDesign Appendix I.pdf

InfoDesign Appendix VI.pdf

InfoDesign Appendix V.pdf

InfoDesign Appendix IV.pdf

InfoDesign Appendix III.pdf

InfoDesign Appendix II.pdf

Key: 760

Appendix I: InfoDesign-Affiliated Faculty Members

Elizabeth Bonsignore, Assistant Research Scientist

Ph.D., Information Studies, UMD

Areas of expertise: participatory design, interactive technology to support learning, user experience

Joel Chan, Assistant Professor

Ph.D., Cognitive Psychology, University of Pittsburgh

Areas of expertise: augmentation of human experience and creativity

Tamara Clegg, Associate Professor

Ph.D., Interactive Computing, Georgia Tech

Areas of expertise: technology to support learning environments, participatory design

Vedat Diker, Principal Lecturer

Ph.D., Information Science, SUNY Albany

Areas of expertise: modeling and simulation of socioeconomic systems

Niklas Elmqvist, Professor

Ph.D., Computer Science, Chalmers University of Technology (Sweden)

Areas of expertise: information visualization, visual analytics

Dan Greene, Assistant Professor

Ph.D., American Studies, UMD

Areas of expertise: technology and work, privacy and surveillance, values in design

Jonathan Lazar, Professor

Ph.D., Information Systems, UMBC

Areas of expertise: accessibility in design

Alex Leitch, Lecturer

M.Des., Art, Media and Design, Ontario College of Art and Design

Areas of expertise: MakerSpaces, environment design, web design

Wayne Lutters, Associate Professor

Ph.D., Information and Computer Science, UC Irvine

Areas of expertise: computer-supported cooperative work, social computing, usable privacy and security

Katie Shilton, Associate Professor

Ph.D., Information Studies, UCLA

Areas of expertise: social and ethical implications of emerging technologies, information policy, social values and technology

Mega Subramanian, Associate Professor

Ph.D., Information Studies, Florida State

Areas of expertise: youth learning and technology, youth digital practices

Jessica Vitak, Associate Professor

Ph.D., Media and Information Studies, Michigan State

Areas of expertise: computer-mediated communication, social media, privacy, social capital

Caro Williams-Pearce, Assistant Professor

Ph.D., Curriculum and Instruction, University of Wisconsin

Areas of expertise: game design, online interactive lesson design

Appendix II: Curriculum Map

| SLO / Core Course Mapping | IDEA258 | INST126 | INST104 | INST201 | SOCY105 | STAT100 | PLCY338D | INST362 | INST367 | INST406 | INST454 | INST466 | INST491 |
|---|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|---------|---------|
| <i>Frame important problems at the intersection of people and information</i> | | | | | | | | | | | | | |
| <i>FRAME: Analyze the interplay of people, information, and technology at various scales (e.g., individuals or small groups, communities or organizations, regions or institutions)</i> | | | | | 2 | | 3 | 3 | | | | | 4 |
| <i>FRAME: Leverage a systems-thinking approach through modeling and simulation</i> | 1 | | | | | | | | | | 4 | | |
| <i>Design solutions for these problems</i> | | | | | | | | | | | | | |
| <i>DESIGN: Implement design thinking skills, including user research, ideation, prototyping, and participatory design</i> | 2 | | 1 | | | | 3 | 3 | | 3 | | | 4 |
| <i>DESIGN: Communicate ideas to gather momentum and iterate through sketching, prototyping and data visualization</i> | 1 | | 1 | 2 | 1 | | 1 | 2 | 4 | 4 | | | 4 |
| <i>DESIGN: Iteratively assemble existing components to form new solutions within a supportive culture of critique</i> | 1 | 3 | | | | | | | | | | | 4 |
| <i>DESIGN: Attend to the ethical and equitable implications of their designs</i> | | | 1 | 3 | | | | | | 2 | | 4 | |
| <i>Realize, deploy, and iterate on these solutions at appropriately selected scale(s)</i> | | | | | | | | | | | | | |
| <i>REALIZE: Assess the scale of the problem and the appropriate deployment of potential solutions</i> | 1 | | | | | | | | | | 4 | | 2 |
| <i>REALIZE: Organize people to properly implement solutions through leadership and entrepreneurship skills</i> | 2 | | | | | | 2 | 2 | | | | | 4 |
| <i>REALIZE: Evaluate success of a solution in a socially embedded setting, to include the employment of skills such as testing, evaluation, and auditing</i> | 1 | | 1 | | | | 3 | 2 | 2 | | | | 4 |

Levels of Mastery

1: Awareness

2: Content Literacy

3: Expert Experience-Guided

4: Expert Experience-Independent

Appendix III: Washington CoLAB Curriculum Map

InfoDesign students will be eligible for both the Digital Generalist credential and the Data Analytics Specialist credential with the Washington CoLAB.

| Washington CoLAB Outcomes X Technology and Information Design Courses | InfoDesign Generalist Courses | | | | | | InfoDesign Specialist Courses | | | | | |
|--|---------------------------------|--|--------------------------------------|---|--|-----------------------------------|--|--|--|--|---|-----------------------------|
| | INST104 Design Across Campus | INST126 Introduction to Programming for Information Science | IDEA258 Becoming a Design Thinker | SOCY105 Introduction to Contemporary Social Problems | STAT100 Elementary Statistics and Probability | INST204 Designing Fair Systems | PLCY388D Innovation and Social Change | INST367 Prototyping and Development Technologies Studio | INST406 Cross-Disciplinary Design Communication Lab | INST454 Modeling and Simulating Systemic Problems | INST466 Technology, Culture, and Society | INST491 Capstone Project |
| Digital Generalist Credential | | | | | | | | | | | | |
| Role of Data and Analytics | Introduced | Introduced | | Introduced | | Emphasized | | Introduced | Introduced | Emphasized | Emphasized | Emphasized |
| Probability and Descriptive and Inferential Statistics | | | | | Introduced and Emphasized | | | | | Emphasized | | Emphasized |
| Data Manipulation | | Introduced | | | | | | | Introduced | Emphasized | | Emphasized |
| Data Ethics | | Introduced | | | | Emphasized | Introduced | Introduced | Emphasized | Introduced | Emphasized | Emphasized |
| Data Security | | Introduced | | | | Emphasized | | Introduced | Introduced | | Emphasized | Emphasized |
| Specialist Credential: Data Analytics | | | | | | | | | | | | |
| Data Management and Governance | | Introduced | | | | Emphasized | | Introduced | Introduced | Introduced | Emphasized | Emphasized |
| Data Manipulation | | Introduced | | | | | | | Introduced | Emphasized | | Emphasized |
| Probability and Descriptive and Inferential Statistics | | | | | Introduced and Emphasized | | | | | Emphasized | | Emphasized |
| Data Visualization and Communication | Introduced | | | | | | | | Emphasized | Emphasized | Emphasized | Emphasized |
| Foundations of Systems Development Life Cycle | | | | | | Emphasized | Introduced | Emphasized | Introduced | | | Emphasized |
| Data Ethics | | Introduced | | | | Emphasized | | Introduced | Emphasized | Introduced | Emphasized | Emphasized |

Katherine Worboys Izsak <kworboys@umd.edu>

Fwd: Including STAT100 as benchmark for new undergraduate major

Ron Padron <rapadron@umd.edu>

Mon, Oct 19, 2020 at 7:22 PM

To: Katherine Worboys Izsak <kworboys@umd.edu>

See below.

Ron

Ron Padrón, MS | Interim Director of Undergraduate Operations*{Pronouns: He, His, Him}*

College of Information Studies

4130 Campus Drive | College Park, MD 20742

301.405.1040 (P) | ischool.umd.edu

----- Forwarded message -----

From: **Doron Levy** <dlevy@umd.edu>

Date: Mon, Oct 19, 2020 at 7:12 PM

Subject: Re: Including STAT100 as benchmark for new undergraduate major

To: Ron Padron <rapadron@umd.edu>Cc: Antoine Mellet <mellet@umd.edu>

Hi Ron,

Thanks for reaching out. I confirmed with our undergraduate chair (Antoine Mellet, cc-ed), and we are happy to have Stat 100 listed as a benchmark requirement for your program.

Best regards -

Doron

Doron Levy
Professor and Chair
Department of Mathematics
University of Maryland
College Park, MD 20742
[Web](#) | [Twitter](#) | [LinkedIn](#) | 301-405-5051

[Quoted text hidden]



Katherine Worboys Izsak <kworboys@umd.edu>

Addition of SOCY 105

Nicole Marie Cousin-Gossett <cgossett@umd.edu>
To: Katherine Worboys Izsak <kworboys@umd.edu>

Mon, Apr 6, 2020 at 2:10 PM

Hello Katherine,

It was a pleasure speaking with you today. As we discussed, please proceed with adding SOCY 105 as a benchmark to the new undergraduate major in Information, Design and Technology.

Best,
Nicole

--

Nicole Cousin-Gossett, Ph.D.

pronouns: she/ her/ hers

Director of Undergraduate Studies & Senior Lecturer

Department of Sociology

University of Maryland

2108D Parren J. Mitchell Art-Sociology Bldg.

College Park, MD 20742

301-405-7365



Katherine Worboys Izsak <kworboys@umd.edu>

Re: New major proposal

Dean Chang <deanc@umd.edu>

Tue, Apr 14, 2020 at 1:45 PM

To: Katherine Izsak <kworboys@umd.edu>

Cc: Erica Estrada-Liou <eestrad3@umd.edu>, Brian Butler <bsbutler@umd.edu>

Hi, Kate.

Thanks for the helpful call today. AIE is excited to partner with the iSchool on the new IDT major. As we discussed, IDEA258A seems like an ideal place for an initial collaboration, with the possibility of other future areas as well.

To confirm our understanding, we would offer another section of IDEA258A when the the first IDT cohort soft launches in Fall 2021 with 20-30 students. That section in the first year would be co-taught by an instructor from the iSchool and an instructor from AIE with a "train the trainer" goal of the iSchool instructor eventually becoming the primary instructor without the AIE co-instructor. However, that would not preclude additional or ongoing collaborations, e.g., iSchool and AIE working together to evolve/improve IDEA258A. (Also, it remains to be determined whether we would want to try to intermix the IDT students among other IDEA258A sections for more diversity of majors, and how teaching would be shared in this scenario.)

In the following year of Fall 2022, the IDT program is expected to grow to a steady state incoming cohort size of 80 students. We will need to re-assess at that time to determine what's possible and what makes sense from AIE's perspective. It is hoped that some of the successful practices developed from the ongoing AIE-Carillon partnership can serve as a model for how AIE would continue working with IDT as it grows. The AIE-Carillon partnership has a multi-person Carillon team in Undergraduate Studies with an AIE team member primarily leading the train the trainer and curriculum development efforts as well as some additional AIE involvement in teaching, recruiting/orientation, etc.

Please let us know if I missed some aspect of what we discussed. We really appreciate the opportunity to be part of this!

-Dean

Dean Chang, Ph.D.
Assoc VP for Innovation & Entrepreneurship
University of Maryland
1118 Edward St. John Center
College Park MD 20742
301-314-8121 office | 301-356-4479 cell
deanc@umd.edu | innovation.umd.edu
Want to meet? calend.ly/deanchang
UMD Innovation Ranked #7 ter.ps/IETop10Again

On Mon, Apr 6, 2020 at 4:22 PM Dean Chang <deanc@umd.edu> wrote:

Hi, Kate.

I'm so sorry I missed your initial email when you sent it, so thanks for the follow-up to make it visible at the top of my inbox! :-)) Here are some quick thoughts after I excitedly glanced at your slides.

I love that you'd like [IDEA258A](#) as part of your design degree program. We've been gradually growing that course from one section limited to about a dozen students when it first launched, to a section of 30 students this year, and now to two planned sections of 30 students this fall (one in Freshman Connection). In general, we hope it can be offered more broadly to more and more students of all majors, and the design degree seems like an ideal fit. Key questions that come to mind include:

- Would there be a special section just for these design students? Or should they be mixed with the open sections of IDEA258A to benefit from a diversity of majors?
- How many students? Who will teach these new students (AIE person, iSchool person, shared, etc.)? And how will that instructor be identified, trained, etc. As you know, we've got only 4 full-time team members at AIE, so generally we will work with a faculty member for a year or two before they are off and running on their own. Then

that frees us up to identify another new faculty champion to work with and repeat the process. But there may be some cool collaboration opportunities with this program that warrant a slightly different model.

- Will this program be offered at Shady Grove? If so, we could leverage some unique benefits of USG.
 - I've already been working with with Tetyana on Design Your Purpose, which might be a good module include somewhere in the program
 - USG is in the process of hiring a new director of their center for innovation and entrepreneurship, and that person happens to be someone who has been working part-time with AIE this semester. So we might have another collaborator on the effort if it were at USG.

Those are just some initial thoughts, but it would be great to get together and discuss more. How about if you and I meet, and I'll check with Erica if she's also able to join. Here's my calendly to find a time:

<https://calendly.com/deanchang/work-with-aie>

If you don't find any times that work well for you or want to meet sooner, just let me know so I can find some more options.

-Dean

Dean Chang, Ph.D.

Assoc VP for Innovation & Entrepreneurship

University of Maryland

1118 Edward St. John Center

College Park MD 20742

301-314-8121 office | 301-356-4479 cell

deanc@umd.edu | innovation.umd.edu

Want to meet? calend.ly/deanchang

UMD Innovation Ranked #7 ter.ps/IETop10Again

On Mon, Apr 6, 2020 at 2:13 PM Katherine Izsak <kworboys@umd.edu> wrote:

Hi Dean and Erica,

I hope you're both well! I just wanted to see if you might have had the chance to discuss the possibility of using your 1-credit design thinking course as a benchmark in our new proposed program. Completely understand that there are a million other things going on!

Many thanks,
Kate

Katherine Worboys Izsak, Ph.D. (she, her, hers)

Director of Academic Programs | Lecturer | College of Information Studies (iSchool)

Affiliated Faculty Member | Department of Anthropology

University of Maryland | College Park, MD | kworboys@umd.edu | 301-405-1246

On Tue, Mar 24, 2020 at 1:17 PM Katherine Izsak <kworboys@umd.edu> wrote:

Dean and Erica,

I hope you're both well!

At the iSchool, we're developing a new undergraduate major: a Bachelor of Design (B.Des.) in Information, Design and Technology. The program will teach students to frame important problems at the intersection of people and information; design solutions for those problems; and realize, deploy and iterate on those solutions. Students will participate in hands-on studio and laboratory classes in interaction design, technology development, problem-solving, visual design, and cross-disciplinary communication. The program aims to prepare students for careers as designers, planners, technology consultants, project managers, and entrepreneurs, in fields such as user experience, mobile development, health-care, law, entertainment, policy, smart-city development, libraries, and archives.

We would like to share the draft proposal for the program (attached) and we would be grateful for an opportunity to meet to discuss the program further, including any thoughts or concerns you have and/or interest in partnering in the program.

1/6/2021

University of Maryland, College Park Mail - Re: New major proposal

Many thanks,
Kate

Katherine Worboys Izsak, Ph.D. (she, her, hers)

Director of Academic Programs | Lecturer | [College of Information Studies \(iSchool\)](#)

Affiliated Faculty Member | [Department of Anthropology](#)

[University of Maryland](#) | College Park, MD | kworboys@umd.edu | 301-405-1246

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | |
|--|----------------|----------------|----------------|----------------|----------------|---------------|
| PERSONNEL | | | | | | |
| Faculty Director (Academic Year) -TBD (20%) | 24,000 | 24,720 | 25,462 | 26,225 | 27,012 | FT Faculty |
| Fringe (29.3%) | 7,032 | 7,243 | 7,460 | 7,684 | 7,915 | FT Faculty |
| Faculty Director (Summer) - TBD (1 months) | 12,000 | 12,360 | 12,731 | 13,113 | 13,506 | FT Faculty |
| Fringe (5.4%) | 648 | 667 | 687 | 708 | 729 | FT Faculty |
| Assist. Dean, Acad. Affairs - Kate Izsak (5%) | 4,738 | 4,880 | 5,027 | 5,177 | 5,333 | FT Faculty |
| Fringe (29.3%) | 1,388 | 1,430 | 1,473 | 1,517 | 1,562 | FT Faculty |
| Course Instructors - 8 Courses/Year Y1&2 then 16 Courses/Year | 80,000 | 80,000 | 160,000 | 160,000 | 160,000 | PT Faculty |
| Fringe (29.3%) | 23,440 | 23,440 | 46,880 | 46,880 | 46,880 | PT Faculty |
| Director of Undergrad Operations - Ron Padron (20%) | 15,400 | 15,862 | 16,338 | 16,828 | 17,333 | Admin Staff |
| Fringe (35.4%) | 5,452 | 5,615 | 5,784 | 5,957 | 6,136 | Admin Staff |
| Program Coordinator - TBD (100%) starting year five | - | - | - | - | 50,000 | Support Staff |
| Fringe (35.4%) | - | - | - | - | 17,700 | Support Staff |
| Adviser - TBD (100%) starting year three | - | - | 52,000 | 53,560 | 55,167 | Support Staff |
| Fringe (35.4%) | - | - | 18,408 | 18,960 | 19,529 | Support Staff |
| Hourly Student TA Support - 8 Courses/Year Y1&2 then 16 Courses/Year (one 10 hour/week grader and two 20 hour/week UTAs per course) | 132,000 | 132,000 | 264,000 | 264,000 | 264,000 | TA |
| Fringe (5.4%) | 7,128 | 7,128 | 14,256 | 14,256 | 14,256 | TA |
| PERSONNEL TOTAL | 313,226 | 315,346 | 630,505 | 634,866 | 707,058 | |
| OPERATIONAL | | | | | | |
| Equipment | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | |
| Course Development | 12,648 | 13,027 | 13,418 | 13,821 | 14,235 | |
| Instructional Material | 5,000 | 5,150 | 5,305 | 5,464 | 5,628 | |
| Marketing | 20,000 | 20,600 | 21,218 | 21,855 | 22,510 | |
| OPERATIONAL TOTAL | 62,648 | 63,777 | 64,941 | 66,139 | 67,373 | |
| Facilities and Administration (20%) | 75,175 | 75,825 | 139,089 | 140,201 | 154,886 | |
| | 112,823 | 114,602 | 179,030 | 181,340 | 197,259 | |
| ANNUAL TOTAL | 451,049 | 454,948 | 834,535 | 841,206 | 929,317 | |
| <i>Student Total Estimates</i> | 30 | 80 | 120 | 160 | 200 | |
| <i># of Classes/Year Estimates</i> | 8 | 8 | 16 | 16 | 16 | |

DATE: January 5, 2021

TO: Katherine Izsak
Assistant Dean for Academic Affairs, College of Information Studies

FROM: On behalf of the University of Maryland Libraries:
Rachel Gammons, Liaison to the School of Information Studies
Maggie Saponaro, Director, Collection Development Strategies
Daniel Mack, Associate Dean, Collection Strategies & Services

RE: Library Collection Assessment

We are providing this assessment in response to a proposal by the Katherine Izsack in the College of Information Studies (iSchool) to create a Bachelor of Arts in Technology and Information Design. The iSchool asked that we at the University of Maryland Libraries assess our collection resources to determine how well the Libraries support the curriculum of this proposed program.

Serial Publications

The proposed Bachelor of Arts in Technology and Information Design is an undergraduate program focusing on the intersection of people and technology that blends coursework in Information Studies with courses in Art, Architecture, and Sociology. In line with the existing Bachelor of Science in Information Sciences, it is expected that the program will rely heavily on online resources. The University of Maryland Libraries currently subscribe to a large number of scholarly journals in online format that focus on human computer interaction, information science, data science, and data analytics, as well as community planning, business, communications, art and design, and architecture.

The Libraries subscribe to most of the top ranked journals that are listed in Information Science and Computer Science categories in the Social Sciences Edition of *Journal Citation Reports*. * These journals include the following, all of which are available online:

- *Journal of Computer Mediated Communication*
- *International Journal of Information Management*
- *Information Systems Journal*
- *Information Processing & Management*
- *MIS Quarterly: Management Information Systems*
- *Journal of Strategic Information Systems*
- *Information Communication & Society*
- *Computers & Society*

The Libraries subscribe to top-ranked journals in aligned disciplines, including the following, all of which are available online:

- *American Journal of Sociology*
- *Computers, Environment, and Urban Systems*
- *Design Studies*
- *Social Problems*

*Note: *Journal Citation Reports* is a tool for evaluating scholarly journals. It computes these evaluations from the relative number of citations compiled in the *Science Citation Index* and *Social Sciences Citation Index* database tools.

Databases

The Libraries' *Database Finder* (<http://www.lib.umd.edu/dbfinder>) resource offers online access to databases that provide indexing and access to scholarly journal articles and other information sources. Several of these databases cover subject areas that would be relevant to this proposed program. Databases that would be useful in the field of Information Science and Human-Computer Interaction are *ACM Digital Library* and *Library and Information Science Source Information*. Other subject area databases that would be relevant to this curriculum include *ARTbibliographies Modern (ABM)*, *ARTStor*, and *Avery Index to Architectural Periodicals*. A general/multidisciplinary database, *Academic Search Ultimate* is also a good source of articles relevant to this topic.

In many-and likely in most-cases, these indexes offer full text copies of the relevant journal articles. In those instances in which the journal articles are available only in print format, the Libraries can make electronic copies available to students through the Libraries Interlibrary Loan System.

Monographs

The Libraries regularly acquire scholarly monographs in Information Science, Human Computer Interaction, and allied subject disciplines. Monographs not already part of the collection can usually be added upon request.

A search of the University of Maryland Libraries' WorldCat UMD catalog was conducted, using a variety of relevant subject terms. This investigation yielded sizable lists of citations of books that we own. A search for "design thinking" yielded 5,500 monographs, 2,500 of which were e-books. A search for "information design" yielded 43,000 monographs, 20,300 of which were e-books. A further search revealed that the Libraries' membership in the Big Ten Academic Alliance (BTAA) dramatically increases these holdings and citations. A search for "cybersecurity" from BTAA holdings yielded 15,000 books and "threat intelligence" yielded 113,000 books.

Interlibrary Loan Services

Interlibrary Loan <https://www.lib.umd.edu/access/ill> is a free service that enables UMD users to borrow books and obtain online articles and book chapters from materials not held in the University System of Maryland.

The article/chapter request service <https://www.lib.umd.edu/access/ill-article-request> scans and delivers journal articles and book chapters within three business days of the request--provided that the items are available in print on the UM Libraries' shelves or in microform. In the event that the requested article or chapter is not available on campus, the request will be automatically forwarded to the Interlibrary Loan service (ILL).

Additional Materials and Resources

In addition to serials, monographs and databases available through the University Libraries, students in the proposed program will have access to a wide range of media, datasets, software, and technology. Media in a variety of formats that can be utilized both on-site and via ELMS course media is available at McKeldin Library. Students can also take advantage of the Architecture and Art Libraries on campus. Additional research support is available through the Research Commons (<http://www.lib.umd.edu/rc>) and technology support and services are available through the Terrapin Learning Commons (<http://www.lib.umd.edu/tlc>).

The subject specialist librarian for the College of Information Studies, Rachel Gammons (rgammons@umd.edu), also serves as an important resource to programs, such as the one proposed. Through departmental partnerships, subject specialists actively develop innovative services and materials that support the University's evolving academic programs and changing research interests. Subject specialists provide one-on-one research assistance online, in-person, or via the phone. They also provide information literacy instruction and can provide answers to questions regarding publishing, copyright and preserving digital works.

Other Research Collections

Because of the University's unique physical location near Washington D.C., Baltimore and Annapolis, University of Maryland students and faculty have access to some of the finest libraries, archives and research centers in the country vitally important for researchers. These include the Library of Congress, the National Archives, and the Smithsonian, to name just few.

Conclusion

With our substantial journals holdings and index databases, as well as additional support services and resources, the University of Maryland Libraries have resources to support teaching and learning in Technology and Information Design. These materials are supplemented by a strong monograph collection, the majority of which are available as e-books. Additionally, the Libraries Scan & Deliver and Interlibrary Loan services make materials that otherwise would not be available accessible to users. As a result, our assessment is that the University of Maryland Libraries are able to meet the curricular and research needs of the proposed Bachelor of Arts in Technology and Information Design.