PROGRAM ANNOUNCEMENT COVER PAGE

Date: December 10, 2019

Institution:	New Jersey Institute of Technology
New Program Title:	Cyberpsychology
Degree Designation:	Bachelor of Science
Programmatic Mission Level for the Institution:	Public research university; doctoral
Degree Abbreviation:	B.S.
CIP Code and Nomenclature (*if possible*):	30.1701; Behavioral Sciences
Campus(es) where the program will be offered:	NJIT main campus, Newark, NJ
Date when program will begin (month and year):	September 2020
Institutions with which articulation agreements will be arranged:	N/A

Is licensure required of program graduates to gain employment? ☐Yes ☑No

Will the institution seek accreditation for this program? ☐Yes ☑No

If yes, list the accrediting organization:

I. OBJECTIVES

New Jersey Institute of Technology (NJIT) proposes a Bachelor of Science in Cyberpsychology in order to prepare students for careers in the newly emerging field of technical behavioral science, comprised of numerous rapidly growing industries and careers, including user experience design and research, consulting, strategy, brand management, and community relations management, as well as to pursue graduate education in the behavioral and social sciences, law, and medicine.

Designed for students with a strong interest in the psychological and behavioral sciences as well as social science research, the B.S. in Cyberpsychology emphasizes an applied scientific approach to studying human behavior that is consistent with NJITs well-earned reputation as a polytechnic institution that confers degrees denoting a high return on investment. The proposed degree program exposes students to foundational concepts in the psychological and behavioral sciences through rigorous coursework in theory, research methodology, and professional development while simultaneously equipping students with skills in applied research design, communication, and project management.

The B.S. in Cyberpsychology builds heavily on existing assets within the B.S. in Science, Technology, & Society (STS) degree program, which is housed in the Department of Humanities in the College of Science & Liberal Arts. The proposed degree program will also benefit from the fact that it established its roots as a newly-launched degree option within the current STS degree program, with an enrollment already approaching approximately ten students. In this program announcement, a waiver of an external consultant is not requested, rather this is being pursued as a new program following traditional new degree program proposal guidelines.

II. EVALUATION & LEARNING OUTCOMES ASSESSMENT PLAN

All NJIT courses and degree programs are assessed regularly and systematically. The proposed Bachelor of Science in Cyberpsychology program will be assessed in accordance with the institution's existing assessment standards and practices to ensure continual program improvement. Courses required in order to earn the B.S. in Cyberpsychology will be evaluated in accordance with all applicable institutional and department-level academic assessment plans and practices.

Formative and summative assessment will occur at multiple levels. The student learning outcomes represent dimensional operationalizations of the program's objectives; thus, the assessment of one is inextricably linked to the evaluation of the other. The program objectives, in turn, are designed to meet the program goals, the evaluation of which will aid in confirming whether the program objectives and student learning outcomes are satisfactory and meaningful, and will also serve to identify areas for program improvement.

Both direct and indirect assessment methods will be used, including systematic analysis of coursework, course evaluations, student opinion reports, student surveys, alumni surveys, internship reports, internship employer evaluations (where applicable), advisory board surveys, and the results of the capstone experience. The capstone course, which students will generally take during their final semester before graduation, will provide a culminating experience comprised of independent research in the field of applied behavioral sciences, a cooperative experience in a professional setting relevant to a student's career goals, or a series of professional development seminars.

Students graduating with a degree in cyberpsychology should anticipate the acquisition of skills, knowledge, and professional training that enable them to pursue careers in user experience design and research, consulting, strategy, brand management, and community relations management as well as to pursue graduate education in the behavioral and social sciences, law, and medicine. The primary goal of the B.S. in Cyberpsychology is to develop students who have the necessary skills and knowledge to pursue competitive professional and academic careers.

At the institutional level, the Office of Institutional Effectiveness (OIE) is responsible for assessment oversight at NJIT. The OIE works with individual academic divisions and units in order to assess academic programs on a regular basis in an effective, structured, and reliable manner.

The proposed B.S. in Cyberpsychology has been established based on program goals, learning objectives, as well as students learning outcomes. Figure 1 displays a summary of the assessment and evaluation plans. Tables 1 and 2 present the assessment plans for the program goals, objectives, and student learning outcomes, respectively, designed to achieve all related professional as well as institutional requirements.

II.A. Cyberpsychology Program Goals

There are three (3) comprehensive program goals (PGs):

1. Provide students with a broad systematic understanding of human behavior, including the biological, psychological, and social factors that influence such behavior, as well as the application of this knowledge using social science research methodologies. [PG1]
2. Support NJIT's mission of excellence in education, research, economic development, and service. [PG2]
3. Develop and sustain a baccalaureate degree program in the social and behavioral sciences that has enduring professional applicability and is aligned with the educational standards articulated by the scientific and professional organizations encompassing the discipline. [PG3]

II.B. Cyberpsychology Program Objectives

The program is comprised of five (5) student learning objectives (POs), which have been derived per the latest guidelines from the American Psychological Association (2013):

1. Develop a knowledge base in the applied behavioral and psychological sciences. [PO1]
2. Understand scientific inquiry and apply critical thinking in order to scientifically study human behavior. [PO2]
3. Approach the scientific study of human behavior through the lens of ethics, social responsibility, and diversity. [PO3]
4. Demonstrate effective communication skills in order to convey ideas and to engage in thoughtful, critical analysis. [PO4]
5. Understand and apply psychological principles in the context of professional growth and development. [PO5]

II.C. Cyberpsychology Student Learning Outcomes

In addition to goals and objectives, the proposed B.S. in Cyberpsychology includes two sets of student learning outcomes: (1) program-specific and (2) institutional (i.e., NJIT).

II.C.1. Program-Based Student Learning Outcomes

The cyberpsychology program-based learning outcomes (CPSYs) are organized by the program objectives articulated in Section II.B. Students earning a B.S. in Cyberpsychology from New Jersey Institute of Technology will demonstrate proficiency in their abilities to:

1.1 Describe key concepts, principles, and overarching themes in psychology. [CPSY1]
1.2 Develop a working knowledge of psychology's content domains. [CPSY2]
1.3 Describe applications of psychology. [CPSY3]

2.1 Use scientific reasoning to interpret psychological phenomena. [CPSY4]
2.2 Demonstrate psychology information literacy. [CPSY5]
2.3 Engage in innovative and integrative thinking and problem solving. [CPSY6]

2.4 Interpret, design, and conduct basic psychological research. [CPSY7]
2.5 Incorporate sociocultural factors in scientific inquiry. [CPSY8]

3.1 Apply ethical standards to evaluate psychological science and practice. [CPSY9]
3.2 Build and enhance interpersonal relationships. [CPSY10]
3.3 Adopt values that build community at local, national, and global levels. [CPSY11]

4.1 Demonstrate effective writing for different purposes. [CPSY12]
4.2 Exhibit effective presentation skills for different purposes. [CPSY13]
4.3 Interact effectively with others. [CPSY14]

5.1 Apply course content and skills to career goals. [CPSY15]
5.2 Exhibit self-efficacy and self-regulation. [CPSY16]
5.3 Refine project-management skills. [CPSY17]
5.4 Enhance teamwork capacity. [CPSY18]
5.5 Develop meaningful professional direction for life after graduation. [CPSY19]

For a summary of the program-based student learning outcomes, and in order to view their mapping onto the program objectives, please see Table 2.

II.C.2. NJIT's General Education Requirement (GER) Student Learning Outcomes

NJIT is dedicated to producing graduates who have the knowledge, skills, and motivation necessary to advance the state-of-the-art knowledge in their respective fields in addition to possessing a devotion to lifelong personal development as well as intellectual discovery beyond their discipline. Graduates must possess outstanding communication skills and understand the complexities of contemporary society and the ethical and societal issues involved in the professional pursuit of their discipline. Graduates must also possess a deep understanding of and appreciation for science and technology. The General Education Requirements (GER) are designed to be the dynamic yet minimal foundational curriculum encompassing the necessary preconditions for success in undergraduate disciplines as well as the breadth of knowledge demanded by contemporary society.

There are five (5) NJIT GER student learning outcomes (GERs):

1. Effectively communicate ideas orally and in writing, as informed by the tenets of a liberal arts education (Liberal Arts Literacy). [GER1]
2. Use logical reasoning and a scientific approach to support conclusions based on empirical evidence (Scientific Literacy). [GER2]
3. Form conclusions that are supported logically by the principles of qualitative and quantitative reasoning, probability, and statistics (Quantitative Literacy). [GER3]
4. Demonstrate the ability to use computing systems in order to access, store, process and analyze information as an essential aspect of critical thinking and problem solving (Computing Literacy). [GER4]
5. Identify and articulate the multifaceted relationships between the economic, social,

and political forces that inform and structure society as well as an individual's place within it (Social Science Literacy). [GER5]

For a summary of the institutional student learning outcomes, and in order to view their mapping onto the program objectives, please see Table 2.

Figure 1. Program Evaluation and Outcome Assessment Hierarchical Summary

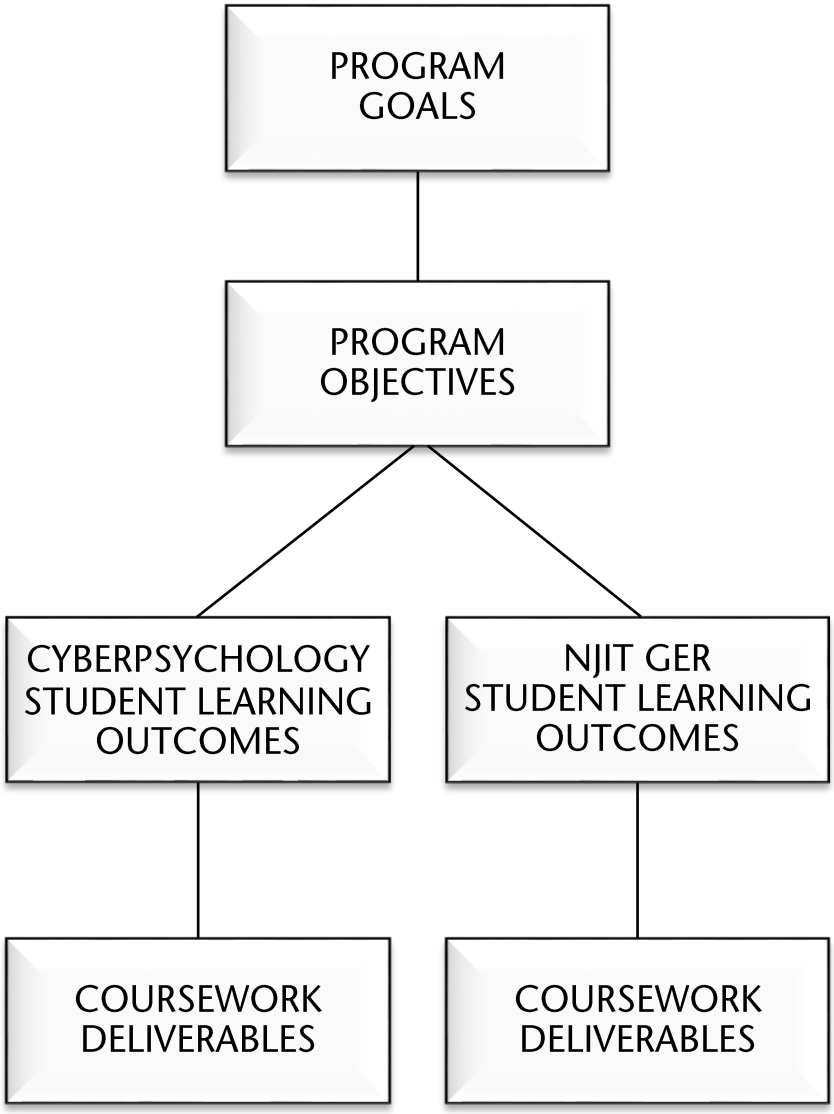

Table 1. Evaluation of Cyberpsychology Program Goals

PROGRAM GOALS	MEASURES
1. **PG1:** Provide students with a broad systematic understanding of human behavior, including the biological, psychological, and social factors that influence such behavior, as well as the application of this knowledge using social science research methodologies.	• Enrollment and retention data. • Student satisfaction surveys. • Student, alumni, and employer surveys ascertaining employment, career placement, and career advancement. • Exit interviews. • Degree completion data.
2. **PG2:** Support NJIT's mission of excellence in education, research, economic development, and service.	• Appropriate institutional and state-level (i.e., AIC/NJPC) approvals. • Successful recruitment and enrollment of gender and racially diverse students.
3. **PG3:** Develop and sustain a baccalaureate degree program in the social and behavioral sciences that has enduring professional applicability and is aligned with the educational standards articulated by the scientific and professional organizations encompassing the discipline.	• Surveys ascertaining employment and salary 1, 5, and 10 years after graduating the program. • Regularly scheduled program assessment and review per APA guidelines.

Table 2. Curriculum Map & Assessment of Programmatic & Institutional Student Learning Outcomes

PROGRAM OBJECTIVE	STUDENT LEARNING OUTCOMES	COURSE(S)	ASSESSMENT
1. PO1: Develop a knowledge base in the applied behavioral and psychological sciences.	• **CPSY1**: Describe key concepts, principles, and overarching themes in psychology. • **CPSY2**: Develop a working knowledge of psychology's content domains. • **CPSY3**: Describe applications of psychology.	Biology of Behavior Foundations in Cyberpsychology I/II General Psychology Psychology as a Behavioral Science Social Psychology	• Capstone experience report • Final projects w/ rubrics • Objective exam results • Oral & written assignments w/ rubrics • Reaction papers • Research papers w/ rubrics
2. PO2: Understand scientific inquiry and apply critical thinking in order to scientifically study human behavior.	• **CPSY4**: Use scientific reasoning to interpret psychological phenomena. • **CPSY5**: Demonstrate psychology information literacy. • **CPSY6**: Engage in innovative and integrative thinking and problem solving. • **CPSY7**: Interpret, design, and conduct basic psychological research. • **CPSY8**: Incorporate sociocultural factors in scientific inquiry. • **GER2**: Use logical reasoning and a scientific approach to support conclusions based on empirical evidence. • **GER3**: Form conclusions that are supported logically by the principles of qualitative and quantitative reasoning, probability, and statistics. • **GER4**: Demonstrate the ability to use computing systems in order to access, store, process and analyze information as an essential aspect of critical thinking and problem solving.	Foundations in Cyberpsychology I/II Principles of Psychometrics Psychopathology Qualitative Research Methods & Lab Quantitative Research Methods & Lab Scientific Literacy GER Social Network Analysis Usability & Measuring UX	• Case studies w/ rubrics • Final projects w/ rubrics • Lab reports w/ rubrics • Objective exam results • Oral & written assignments w/ rubrics
3. PO3: Approach the scientific study of human behavior through the lens of ethics, social responsibility, and diversity.	• **CPSY9**: Apply ethical standards to evaluate psychological science and practice. • **CPSY10**: Build and enhance interpersonal relationships. • **CPSY11**: Adopt values that build community at local, national, and global levels. • **GER5**: Identify and articulate the multifaceted relationships between the economic, social, and political forces that inform and structure society as well as an individual's place within it.	A.I. & the Human Mind Computers and Society Minds and Machines Psychology as a Behavioral Science Psychology of Diversity Psychopathology	• Capstone experience report • Case studies w/ rubrics • Final projects w/ rubrics • Objective exam results • Oral & written assignments w/ rubrics • Research papers w/ rubrics
4. PO4: Demonstrate effective communication skills in order to convey ideas and to engage in thoughtful, critical analysis.	• **CPSY12**: Demonstrate effective writing for different purposes. • **CPSY13**: Exhibit effective presentation skills for different purposes. • **CPSY14**: Interact effectively with others. • **GER1**: Effectively communicate ideas orally and in writing, as informed by the tenets of a liberal arts education.	Composition I/II Principles of Psychometrics Qualitative Research Methods & Lab Quantitative Research Methods & Lab	• Case studies w/ rubrics • Final projects w/ rubrics • Objective exam results • Oral & written assignments w/ rubrics
5. PO5: Understand and apply psychological principles in the context of professional growth and development.	• **CPSY15**: Apply course content and skills to career goals. • **CPSY16**: Exhibit self-efficacy and self-regulation. • **CPSY17**: Refine project-management skills. • **CPSY18**: Enhance teamwork capacity. • **CPSY19**: Develop meaningful professional direction for life after graduation.	Capstone in Psychology Designing the User Experience Enhancing User Experience Psychology as a Behavioral Science Social Network Analysis Usability & Measuring UX	• Case studies w/ rubrics • Final projects w/ rubrics • Objective exam results • Oral & written assignments w/ rubrics

II.D. Institutional Learning Goals

In compliance with the accreditation standards and guidelines of the Middle States Commission on Higher Education, NJIT maintains adherence to the following five Institutional Learning Goals (ILGs):

1. Research-Based Inquiry: Students employ methods appropriate to their discipline. [ILG1]
2. Collaboration: Students work effectively in teams, applying multidisciplinary and global perspectives. [ILG2]
3. Ethical Conduct: Students demonstrate professional and civic responsibility, including respect for all individuals. [ILG3]
4. Creativity: Students use heuristics to evaluate, analyze, and synthesize innovative solutions to existing and emerging problems. [ILG4]
5. Professional Readiness: Students exhibit knowledge and skills, and engage in experiences, necessary for professional and personal growth. [ILG5]

Beyond NJIT's institutional accreditation by the Middle States Commission on Higher Education, there is no external accreditation applicable to the proposed degree program.

III. RELATIONSHIP TO INSTITUTIONAL STRATEGIC PLAN & INSTITUTIONAL IMPACT

Currently there is no program at NJIT that parallels the proposed Bachelor of Science in Cyberpsychology program. While the program has its roots as an option within the Bachelor of Science in Science, Technology, and Society (STS) program, the proposed curriculum (outlined in Section VII: Degree Requirements) varies considerably from that of its parent program and offers students a unique academic experience in the social and behavioral sciences.

III.A. Relationship to Institutional Strategic Plan

Furthermore, the proposed B.S. in Cyberpsychology is strongly aligned with NJIT's strategic priorities, as identified in *Building on a Strong Foundation—NJIT 2025* (2019b):

1. Students: Enhance the curriculum and promote student learning:

   Develop new programs in areas with career growth potential that are related to existing NJIT strengths. New programs will attract a broader population of students and keep NJIT current with new career opportunities (p. 10).

2. Faculty: Develop a more diverse faculty:

   Develop family-friendly programs, resources, and policies detailing issues important to families, women, underrepresented minorities, members of the LGBTQ+ community, and candidates with spouses/partners. Developing a family-friendly environment will create a more welcoming atmosphere for all new and existing faculty (p. 15).

3. Prominence: Increase university visibility:

   Recognize and highlight faculty professional honors, prizes, and awards. … Highlight research achievements in the media, particularly in areas of public interest or with significant societal or economic impact (p. 29).

III.A.1. Students

Develop new programs in areas with career growth potential that are related to existing institutional strengths. New programs will attract a broader population of students and keep NJIT current with new career opportunities (p. 10).

Nationally, since 2004, there has been considerable growth in the number of baccalaureate degrees in psychology conferred as well as the number of undergraduate psychology degree programs offered by institutions of higher education (Christidis, Lin, & Conroy, 2019). During this time, conferral of baccalaureate psychology degrees has increased by approximately 43%, and the number institutions awarding baccalaureate psychology degrees has increased by 12% (American Psychological Association, 2019). Beginning in 2016, however, growth in the psychology baccalaureate began to slow (see Table 3 for further detail). While the exact reasons

for the slowed growth remain unknown, it is plausible that the slight decline is in part attributable to national conversations about the return on investment for baccalaureate degrees by subject area (e.g., Carnevale, Cheah, & Hanson, 2015).

According to labor market data from the Federal Reserve Bank of New York (2019), individuals graduating with baccalaureate degrees in psychology are, on average, more likely to be unemployed (i.e., 4.1% for psychology majors as opposed to 3.9% all majors) and underemployed (i.e., 49.7% for psychology majors as opposed to 42.9% for all majors). The relationship between the undergraduate psychology degree and problematic professional placement and development are well documented by stakeholders within the domain as well. Numerous studies, professional society publications, and white papers have articulated the need of undergraduate psychology programs to equip students with career-related skills and the need of such programs to better communicate professional applications of the baccalaureate psychology degree (e.g., American Psychological Association, 2013; Appleby, 2017; Norcross, Hailstorks, Aiken, Pfund, Stamm, & Christidis, 2016; Schwartz, Gregg, & McKee, 2018; etc.).

The development of the B.S. in Cyberpsychology has been highly informed by the above data and calls to action. To that end, students enrolled in the proposed program will be required to complete at least 12 credit hours in applied skills courses, with the option to complete up to 33 credit hours of applied skills coursework, depending on the career goals and professional aims of the student. Thus, the B.S. in Cyberpsychology offers something completely new to our current and future undergraduate students while incorporating professional development into the program's structure, as is consistent with NJIT's mission.

III.A.2. Faculty

Gender composition among faculty at institutions of higher education in the United States is finally approaching parity, with women comprising 49.6% of all faculty[1] at degree-granting postsecondary institutions in 2017 (National Center for Education Statistics, 2018b). In stark contrast to the average, gender parity among faculty at American polytechnic universities remains heavily skewed male. According to the most recent "Engineering by the Numbers" (Roy, 2019), in 2018, women comprised just 17.4% of tenure-track or tenured faculty across 23 different types of engineering departments spanning 393 degree-granting postsecondary institutions in the United States.

Racial diversity among tenure-track or tenured faculty in engineering disciplines also continues to lag behind national averages for most minority groups. In 2017, black and African-American individuals accounted for 6.0% of all faculty at degree-granting

[1] The National Center for Education Statistics operationalizes "faculty" as comprised of instructional staff at degree-granting postsecondary institutions with the title of professor, associate professor, assistant professor, instructor, lecturer, assisting professor, adjunct professor, or interim professor (or the equivalent). Excluded are graduate students with titles such as graduate or teaching fellow who assist senior faculty.

postsecondary institutions nationally as compared to 3.1% of engineering tenure-track or tenured faculty for the same time period (National Center for Education Statistics, 2018b; Roy, 2019). For the same year, Hispanic individuals accounted for 5.2% of all faculty at degree-granting postsecondary institutions nationally as compared to 3.9% of engineering tenure-track or tenured faculty (Roy, 2018). As a polytechnic, NJIT is about on par with our peer institutions. In 2018, the institution's full-time faculty and instructional staff was comprised of 24.2% women, 3.9% black and African-American individuals, 3.1% Hispanic individuals, and 27.0% Asian individuals (New Jersey Institute of Technology, 2019a).

The demographics of full-time faculty affiliated with psychology programs at degree-granting postsecondary institutions tend to be more diverse in both their gender and racial compositions. Launching a program in the applied behavioral and psychological sciences will diversify NJIT's full-time faculty and instructional staff. According to a 2019 white paper from the American Psychological Association's Center for Workplace Studies, women comprised 54.9% of all tenure-track or tenured faculty in the psychological sciences for the 2018-2019 academic year and approximately 64.1% of tenure-track (i.e., pre-tenure) faculty for the same time period (Christidis, Conroy, Lin, & Stamm, 2019). According to the same study, racial minorities comprised 18.0% of all tenure-track or tenured faculty in the psychological sciences for the 2018-2019 academic year and 25.4% of tenure-track (i.e., pre-tenure) faculty for the same time period (Christidis, Conroy, Lin, & Stamm, 2019).

III.A.3. Prominence

The nascent field of cyberpsychology has only recently begun to form and articulate a cohesive identity as a sub-domain of applied psychology (e.g., Widman, 2018). When the cyberpsychology option within the Bachelor of Science in Science, Technology, & Society degree program was initially proposed during the 2017-2018 academic year, no other such programs existed domestically, and only a handful of such graduate programs existed internationally. In relatively short time, there has already been demonstrable growth in the number of academic institutions, both domestic and international, offering academic programs in this subject area. Table 3 presents a list of current academic programs in cyberpsychology be location and level of degree conferred.

It is anticipated that growth in this area will continue, and moving forward with new degree program in cyberpsychology provides NJIT a key opportunity to become a leader in a newly emerging field that builds on the institution's polytechnic heritage while simultaneously redefining the institution for new and future generations of students.

Table 3. List of Academic Programs in Cyberpsychology by Location and Degree Level

INSTITUTION	PROGRAM
Regent University, Virginia Beach, Virginia	M.S. in Psychology – Cyberpsychology & Cybersecurity
Norfolk State University, Virginia	B.A. in Psychology – Cyberpsychology
Norfolk State University, Virginia	M.S. in Cyberpsychology (*in development*)
University of North Dakota, Grand Forks	Undergraduate certificate in Cyberpsychology
University of Wolverhampton, England	M.Sc. in Cyberpsychology
Dun Laoghaire Institute of Art, Design & Technology, Dublin, Ireland	M.Sc. in Cyberpsychology
Nottingham Trent University, England	M.Sc. in Cyberpsychology

III.B. Impact on Existing Programs

There is currently no program at NJIT that parallels the proposed B.S. in Cyberpsychology program. There is some overlap between the proposed program and the B.S. in Science, Technology, & Society (STS), where the program is currently offered as a degree option, but the changes to the curriculum between the option and the proposed stand-alone degree program are significant. The curriculum for the proposed degree program eliminates seven (7) courses (i.e., 21 credit hours) that are currently required to fulfill the option and adds nine (9) new courses (i.e., 23 credit hours) that are unique to the new curriculum, for a combined total difference of 44 credit hours or approximately 40% of the total coursework needed to fulfill the degree requirements. Elsewhere, the curriculum for the proposed program requires four (4) courses (i.e., 12 credit hours) in information systems, but differs from any of the baccalaureate degrees offered by the Department of Informatics in the Ying Wu College of Computing by no less than fifteen (15) courses totaling 43 credit hours.

As the B.S. in Cyberpsychology is comprised of components of the programs in STS and human-computer interaction/information technology, we anticipate that students enrolled in the program may be motivated to pursue double majors in these fields. Furthermore, given that the curriculum for the proposed degree program contains eleven (11) elective courses (i.e., 33 credit hours), a double major is an objectively achievable goal for matriculated students.

IV. NEED

According to the Digest of Education Statistics from the National Center for Education Statistics (NCES), accredited post-secondary institutions in the United States conferred 116,861 bachelor's degrees in psychology during the 2016-2017 academic year (National Center for Education Statistics, 2018a). Table 4 demonstrates local and national trends in the number of psychology baccalaureates conferred since 2004. According to the Center for Workforce Studies (CWS) from the American Psychological Association (APA), the State of New Jersey conferred 3,599 baccalaureate degrees in psychology in 2018, an increase of approximately 30% since 2004 (American Psychological Association, 2019). Nationally, the number of baccalaureate degrees conferred in psychology has increased by more than 43% during the same time period (American Psychological Association, 2019), indicating New Jersey has not kept pace with the national average.

While the number of psychology baccalaureates conferred annually has grown substantially over the past fifteen years, graduates' career prospects remain a point of concern for both internal and external stakeholder groups. In the second version of their guidelines for the undergraduate psychology major, the American Psychological Association (2013) called for "[c]learer linkages between baccalaureate preparation and workplace success" (p. 10) and for undergraduate programs in the behavioral and psychological sciences to "optimize the competitiveness of their graduates for securing places in the workforce" (p. 16). The Bachelor of Science in Cyberpsychology is unique in that career readiness is a fundamental component of the program, curriculum, and assessment. As demonstrated in Tables 5, 6, and 7, the proposed program prepares graduates for employment opportunities in a variety of different industries and across numerous occupational domains.

IV.A. Occupational Growth

The proposed B.S. in Cyberpsychology has a strong focus on professional development and career readiness, which distinguish it from other baccalaureate programs in the behavioral and psychological sciences. Numerous courses in the curriculum serve the purpose of on professional development, concentrating on the application of applied skills as they translate to potential post-graduate employment opportunities. Accordingly, the B.S. in Cyberpsychology prepares its graduates for a myriad of employment opportunities traversing numerous occupational domains, including art and design (e.g., video game designer), business and financial (e.g., data analytics manager, e-learning specialist, product analyst, etc.), computer and information technology (e.g., app developers, database administrator, user experience designer, etc.), management (e.g., brand manager, community engagement manager, marketing manager, etc.), and media and communication (e.g., e.g., content strategist, social media manager, etc.). The Bureau of Labor Statistics (2019) projects a 10-year job growth rate equal to or greater than 11% (i.e., "much faster than average") for many of the positions for which graduates of the proposed program will be well-prepared for success and gainful, long-term employment.

Job prospects for graduates with a B.S. in Cyberpsychology from NJIT are abundant at all career stages, from entry-level to those positions requiring prior work experience. At the

entry-level, graduates are qualified to pursue gainful employment as analysts and specialists in market research, operations, and public relations we well as opportunities in web development. As demonstrated in Table 5, in-state median wages for these occupations exceed the median wages for the same occupations for other states within the region, for the metropolitan area, and nationally (Bureau of Labor Statistics, 2019). Furthermore, 10-year projected in-state job growth for these occupations is uniformly high, with a minimum of 9.1% (i.e., "faster than average" growth) for public relations specialists (6.4% nationally) and web developers (13.0% nationally) and a maximum of 24.8% (i.e., "much faster than average" growth) for operations research analysts (25.6% nationally) (Bureau of Labor Statistics, 2019; Projections Central, n.d.). As demonstrated in Tables 6 and 7, in-state wages—almost uniformly—continue to exceed national averages for the same occupations, and in-state growth projections remain, with one exception, at or above approximately 10% for occupations requiring some experience (i.e., generally less than 5 years) as well as for those requiring 5 or more years of experience, respectively (Bureau of Labor Statistics, 2019; Projections Central, n.d.).

Table 4. Bachelor's Degrees in Psychology Awarded Locally and Nationally, 2004-2018

	NUMBER OF BACHELOR'S DEGREES IN PSYCHOLOGY CONFERRED	
YEAR	STATE OF NEW JERSEY	NATIONAL TOTAL
2004	2,772	86,989
2005	2,769	90,811
2006	2,705	93,804
2007	2,772	95,578
2008	2,842	98,075
2009	2,934	99,968
2010	3,040	102,969
2011	3,062	107,148
2012	3,343	116,154
2013	3,431	121,948
2014	3,631	125,087
2015	3,702	125,136
2016	3,608	125,123
2017	3,532	124,497
2018	3,599	124,366

NOTE: The CWS national total for 2017 is 124,497, while the NCES-reported national total for the same year is 116,861 (as indicated on page 13); this difference is attributable to CWS totals including psychology as either a first or a second major, whereas the NCES totals are for first major only. Furthermore, the CWS totals are for all institutions included in the IPEDs data (N = 6,857), while the NCES totals are reflective of U.S. institutions only (N = 6,702).

Table 5. Career Opportunities, Wage Data, and Job Outlook for Individuals with a B.S. in Cyberpsychology: Entry-Level

JOB TITLE		WAGE DATA[1]					OUTLOOK[2]	INDUSTRY JOB TITLES
Market Research Analyst & Marketing Specialist		***10%***	***25%***	***50%***	***75%***	***90%***		• Market Research Analyst • Market Research Specialist • Marketing Analyst • Marketing Consultant • Marketing Forecaster • Marketing Specialist
	New Jersey	$43,210	$57,490	$78,030	$109,160	$146,850	20.5%	
	New York	$38,170	$52,570	$71,460	$98,150	$127,420	26.4%	
	NJ-NY Metro	$41,010	$55,440	$75,010	$102,910	$133,350		
	United States	$34,310	$46,360	$63,120	$88,680	$121,080	20.4%	
Operations Research Analyst		***10%***	***25%***	***50%***	***75%***	***90%***		• Operations Analyst • Operations Research Analyst • Procedure Analyst • Process Analyst
	New Jersey	$58,580	$76,120	$101,540	$133,440	$162,950	24.8%	
	New York	$54,080	$69,680	$92,310	$119,200	$167,910	29.9%	
	NJ-NY Metro	$57,740	$77,070	$99,840	$129,900	$173,280		
	United States	$46,810	$61,280	$83,390	$109,670	$136,250	25.6%	
Public Relations Specialist		***10%***	***25%***	***50%***	***75%***	***90%***		• Lobbyist • Media Relations Specialist • Press Secretary • Public Relations Counselor • Public Relations Representative • Publicist
	New Jersey	$40,060	$52,430	$69,520	$91,180	$124,290	9.1%	
	New York	$34,790	$46,640	$64,650	$91,390	$124,790	14.8%	
	NJ-NY Metro	$36,650	$49,440	$68,430	$95,100	$129,390		
	United States	$33,690	$44,490	$60,000	$81,550	$112,310	6.4%	
Web Developer		***10%***	***25%***	***50%***	***75%***	***90%***		• Internet Application Developer • Internet Developer • Intranet Developer • Web Content Developer • Web Designer • Web Developer
	New Jersey	$42,030	$55,850	$78,010	$104,920	$145,670	9.1%	
	New York	$41,610	$51,970	$71,730	$98,640	$137,300	19.6%	
	NJ-NY Metro	$43,030	$54,790	$76,030	$104,800	$145,550		
	United States	$37,930	$50,990	$69,430	$95,020	$124,480	13.0%	

NOTE: "Entry-level" signifies no prior experience necessary; all jobs, with the exception of "Web Developer," require a Bachelor's degree (Bureau of Labor Statistics, 2019).

[1] Annual wage data from 2018 (Bureau of Labor Statistics, 2019).

[2] Outlook data are 10-year projections for 2016-2026 for New Jersey and New York (Projections Central, n.d.) and for 2018-2028 for the United States (Bureau of Labor Statistics, 2019).

Table 6. Career Opportunities, Wage Data, and Job Outlook for Individuals with a B.S. in Cyberpsychology: Some Experience

JOB TITLE		WAGE DATA[1]					OUTLOOK[2]	INDUSTRY JOB TITLES
Advertising and Promotions Managers		***10%***	***25%***	***50%***	***75%***	***90%***		• Advertising Director • Advertising Executive • Advertising Manager • Classified Advertising Manager • Promotions Director • VP Advertising
	New Jersey	$93,070	$114,330	$141,830	$184,010	$208,000	6.5%	
	New York	$85,380	$115,230	$157,710	$208,000	$208,000	10.5%	
	NJ-NY Metro	$87,280	$118,020	$158,640	$208,000	$208,000		
	United States	$57,150	$82,200	$117,130	$163,370	$208,000	3.2%	
Management Analyst		***10%***	***25%***	***50%***	***75%***	***90%***		• Business Analyst • Business Consultant • Business Process Consultant • Clerical Methods Analyst • Commercial Specialist • Industrial Analyst
	New Jersey	$55,730	$72,770	$97,860	$129,680	$167,470	11.2%	
	New York	$52,620	$69,260	$94,970	$136,710	$189,390	18.1%	
	NJ-NY Metro	$55,440	$73,820	$101,590	$145,280	$193,670		
	United States	$48,360	$62,500	$83,610	$112,140	$152,760	13.5%	
Training and Development Specialists		***10%***	***25%***	***50%***	***75%***	***90%***		• Computer Training Specialist • Corporate Trainer • Employee Training Specialist • Job Training Specialist • Training Coordinator • Training Specialist
	New Jersey	$34,860	$54,470	$73,280	$93,640	$116,420	11.3%	
	New York	$32,020	$47,210	$64,590	$88,620	$115,660	17.6%	
	NJ-NY Metro	$31,440	$51,090	$70,180	$94,380	$122,010		
	United States	$32,950	$44,480	$60,870	$80,870	$102,740	9.4%	

NOTE: "Some experience" signifies less than 5 years related occupational experience; all jobs require a Bachelor's degree (Bureau of Labor Statistics, 2019).

[1] Annual wage data from 2018 (Bureau of Labor Statistics, 2019); an annual wage of $208,000 indicates a wage that is equal to or greater than that amount.

[2] Outlook data are 10-year projections for 2016-2026 for New Jersey and New York (Projections Central, n.d.) and for 2018-2028 for the United States (Bureau of Labor Statistics, 2019).

Table 7. Career Opportunities, Wage Data, and Job Outlook for Individuals with a B.S. in Cyberpsychology: Advanced

JOB TITLE		WAGE DATA[1]					OUTLOOK[2]	INDUSTRY JOB TITLES
Marketing Manager		***10%***	***25%***	***50%***	***75%***	***90%***		• Internet Marketing Manager • Marketing Administrator • Marketing Director • VP Marketing
	New Jersey	$93,410	$121,990	$160,420	$208,000	$208,000	9.6%	
	New York	$96,030	$133,200	$172,230	$208,000	$208,000	13.1%	
	NJ-NY Metro	$101,750	$134,330	$173,290	$208,000	$208,000		
	United States	$69,840	$95,770	$134,290	$181,780	$208,000	8.1%	
Public Relations and Fundraising Managers		***10%***	***25%***	***50%***	***75%***	***90%***		• Communication Manager • Fundraising Director • Public Affairs Director • Public Relations Director • Public Relations Manager • Publicity Director
	New Jersey	$88,830	$104,220	$137,140	$199,120	$208,000	10.6%	
	New York	$82,540	$110,270	$149,400	$201,920	$208,000	16.6%	
	NJ-NY Metro	$89,260	$113,290	$152,600	$208,000	$208,000		
	United States	$64,250	$84,120	$114,800	$158,760	$208,000	7.8%	
Training and Development Managers		***10%***	***25%***	***50%***	***75%***	***90%***		• E-Learning Manager • Employee Development Director • Employee Development Manager • Labor Training Manager
	New Jersey	$94,750	$112,580	$144,860	$189,580	$208,000	10.0%	
	New York	$79,190	$109,390	$145,820	$182,910	$208,000	17.0%	
	NJ-NY Metro	$90,290	$118,710	$152,920	$191,190	$208,000		
	United States	$63,600	$83,160	$111,340	$149,010	$192,970	8.1%	

NOTE: "Advanced" signifies 5 or more years of related occupational experience; all jobs require a Bachelor's degree (Bureau of Labor Statistics, 2019).

[1] Annual wage data from 2018 (Bureau of Labor Statistics, 2019); an annual wage of $208,000 indicates a wage that is equal to or greater than that amount.

[2] Outlook data are 10-year projections for 2016-2026 for New Jersey and New York (Projections Central, n.d.) and for 2018-2028 for the United States (Bureau of Labor Statistics, 2019).

IV.B. Relationship to Other Programs in the State & Region

While many New Jersey colleges and universities offer Bachelors of Arts in Psychology or a related filed, only three (3) offer Bachelors of Science in Psychology or a related field. Furthermore, ***only one (1) such program is a STEM designated degree program*** (Department of Homeland Security, 2016). The Bachelor of Science in Cyberpsychology is being proposed for classification as a program in the behavioral sciences per the Department of Education's Classification of Instructional Programs (CIP) taxonomy. Thus, the proposed degree program makes a unique contribution to the State of New Jersey's existing baccalaureate degree programs and does so in a way that is consistent with NJIT's mission, history, and deserved reputation for excellence STEM.

Table 8. Regional Associate Degree Programs in Psychology & Related Fields

INSTITUTION	PROGRAM
Atlantic Cape Community College	A.A. in Psychology
Bergen Community College	A.A. in Liberal Arts – Psychology Option
Brookdale Community College	A.A. in Social Sciences – Psychology Option
Camden County College	A.A. in Liberal Arts & Science – Psychology Option
Essex County College	A.S. in Social Sciences
Hudson County Community College	A.A. in Liberal Arts – Psychology Option
Mercer County Community College	A.A. in Liberal Arts & Sciences *(non-specified)*
Middlesex County College	A.A. in Liberal Arts – Psychology
Morris, County College of	A.A. in Liberal Arts & Sciences – Humanities/Social Science
Ocean County College	A.A. in Psychology
Passaic County Community College	A.A. in Liberal Arts – Psychology Option
Raritan Valley Community College	A.A. in Social Sciences
Rowan College of South Jersey	
Cumberland County	A.A. in Liberal Arts – Psychology Option
Gloucester County	A.A. in Arts & Sciences – Psychology Option
Salem Community College	A.A. in Social Science – Psychology Option
Sussex County Community College	A.A. in Liberal Arts – Psychology Option
Union County College	A.A. in Psychology
Warren County Community College	A.A. in Social Science

Table 9. Regional Baccalaureate Degree Programs in Psychology & Related Fields

INSTITUTION	PROGRAM	CIP CODE
Bloomfield College	B.A. in Psychology	42.0101
Caldwell University	B.A. in Psychology	42.0101
Centenary University	B.A. in Psychology	42.0101
College of Saint Elizabeth	B.A. in Psychology	42.0101
Drew University	B.A. in Psychology	42.0101
Fairleigh Dickinson University	B.A. in Psychology	42.0101
Felician University	B.A. in Psychology	42.0101
	B.A. in Social & Behavioral Sciences	45.9999
Georgian Court University	B.A. in Psychology	42.0101
Kean University	B.A. in Psychology	42.0101
Monmouth University	B.A. in Psychology	42.0101
Montclair State University	B.A. in Psychology	42.0101
New Jersey City University	B.A. in Psychology	42.0101
Pillar College	B.A. in Psychology & Counseling	42.0101
Princeton University	B.A. in Psychology	42.0101
Ramapo College of New Jersey	B.A. in Psychology	42.0101
	B.S. in Psychology	42.0101
Rider University	B.A. in Psychology	42.0101
Rowan University	B.A. in Psychology	42.0101
	B.S. in Psychological Sciences[1]	30.1701
Rutgers University		
Camden	B.A. in Psychology	42.0101
New Brunswick	B.A. in Psychology	42.0101
	B.S. in Psychology	42.0101
Newark	B.A. in Psychology	42.0101
Saint Peter's University	B.S. in Psychology	42.0101
Seton Hall University	B.A. in Psychology	42.0101
	B.A. in Social & Behavioral Sciences	24.0103
Stevens Institute of Technology	B.A. in Social Science	24.0199
Stockton University	B.A. in Psychology	42.0101
	B.S. in Psychology	42.0101
The College of New Jersey	B.A. in Psychology	42.0101
Thomas Edison State University	B.A. in Social Science	45.0101
William Paterson University of NJ	B.A. in Psychology	42.0101

NOTE: CIP code 30.1701 – Behavioral Sciences is the only program included here that qualifies for STEM degree designation as outlined in the STEM Designated Degree Program list (Department of Homeland Security, 2016).

V. STUDENT ENROLLMENT

Interest in psychology as major has experienced growth nationally and at the state level, according to longitudinal data collected by the College Board (2007a; 2007b; 2019a; 2019b). The organization, which administers the SAT, collects and reports annually the self-reported intended college major of all high school graduates who took the SAT during high school. Intended college majors are grouped by domain in approximate accordance with the Classification of Instructional Programs (CIP) taxonomy of the U.S. Department of Education's National Center for Education Statistics; graduating seniors intending to major in psychology may indicate their interest in general psychology or one of numerous sub-disciplines: clinical psychology, developmental and child psychology, experimental psychology, industrial and organizational psychology, or social psychology (College Board, 2019c). In 2019, interest in psychology comprised 4.3% of graduating senior test takers at the state level and 4.1% of graduating senior test takers nationally, an increase of approximately one-half percentage point at both levels since 2007 (College Board, 2007a; 2007b; 2019a; 2019b). Interest in psychology has increased *as a percent share of total test takers* as well. At the state level, interest in this area has grown approximately 50% since 2007, while interest at the national level has more than doubled (College Board, 2007a; 2007b; 2019a; 2019b).

Projections for the proposed B.S. in Cyberpsychology program (see Table 10) are thusly based on anticipated demand. With program marketing to capitalize on innate interest in the degree program, we estimate that the program will have at least 40 majors by the end of the second academic year that it is offered. Building on this momentum, we project an approximate additional 30 majors in the third year, an approximate additional 40 majors in the fourth year, and an approximate additional 50 majors in the program's fifth year.

V.A. Admission Requirements

There are no special requirements for admission to the B.S. in Cyberpsychology program. As with our other undergraduate programs in the Department of Humanities and in keeping with NJIT's academic policies, any matriculated student may declare cyberpsychology as a major. Students must maintain a C average in their upper-division major courses in order to be certified for graduation.

Table 10. B.S. in Cyberpsychology Enrollment Projections, AYs 2020-2025

Academic Year	New Freshmen Enrollment	Transfer Student Enrollment	Current Student Enrollment	Estimated Number of Graduates	Total Enrollment
2020-2021	10	0	10	--	20
2021-2022	15	5	20	--	40
2022-2023	20	10	40	--	70
2023-2024	30	10	70	(15)	95
2024-2025	40	10	95	(20)	125

VI. PROGRAM RESOURCES

In order for the proposed Bachelor of Science in Cyberpsychology to be a successful program, it is important that the necessary institutional resources are identified and allocated accordingly. To that end, resources across the following areas will be considered in this section: coursework, faculty, libraries and computing facilities, and classrooms and laboratories.

VI.A. Coursework & Course Development

NJIT is in a strategic position to launch an undergraduate degree-granting program in cyberpsychology. Extant course assets account for approximately 85% of the proposed program's curriculum, and existing academic resources will be leveraged to develop the remaining 15% of curriculum coursework.

The university's program in Science, Technology, & Society (STS) already provides a number of courses that are required by the curriculum:

- STS 210 General Psychology
- STS 304 Qualitative Research Methods
- STS 307 Quantitative Research Methods
- STS 321 Social Psychology
- STS 339 Psychology of Diversity
- STS 350 Computers and Society
- STS 351 Minds and Machines
- STS 359 Foundations of Cyberpsychology
- STS 375 Artificial Intelligence & the Human Mind

In addition, the following courses are under development by faculty and academic staff who will teach within the proposed program:

- PSY 201 Orientation to Psychology as a Behavioral Science
- PSY 215 Biology of Behavior
- PSY 333 Principles of Psychometrics
- PSY 386 Psychopathology
- PSY 490 Co-op Work Experience
- PSY 491 Research & Independent Study
- PSY 495 Senior Seminar in Behavioral & Psychological Sciences
- STS 304A Qualitative Research Methods Lab
- STS 307A Quantitative Research Methods Lab

Syllabi for all these courses are complete and are currently undergoing internal review and pending approval per university course development and approval protocol.

VI.B. Faculty

NJIT is investing in its social and behavioral sciences academic personnel, and beginning Fall 2020, there will be three fulltime faculty and instructional staff lines devoted entirely to the teaching and research within this field:

- A university lecturer in cyberpsychology, the current incumbent of which is Dr. Kate Tyrol, who was hired for the 2018-2019 academic year to serve as coordinator for the cyberpsychology option. Dr. Tyrol has a Ph.D. in science and technology, an M.S. in cognitive science, both from Rensselaer Polytechnic Institute, as well as background in computer science. Her research interests include the sociocultural construction of bodies; gender, sexuality, and identity studies; and cultures of behavioral health.

- A full professor in psychology, the current incumbent of which is Dr. Julie Ancis, who will join the university in her professorial role in Fall 2020, but will begin advising the cyberpsychology program in Spring 2020. Dr. Ancis holds fellow status in two divisions within the American Psychological Association (APA) through her scholarly contributions that span nearly 25 years in the field of psychology; she joins NJIT from Georgia Institute of Technology, where she was associate vice president of institute diversity, equity and inclusion. She is the author of four books, including Gender, Psychology and Justice: The Mental Health of Women and Girls in the Legal System and Culturally Responsive Interventions: Innovative Approaches to Working with Diverse Populations as well as more than 100 peer-reviewed journal articles, book chapters, and conference papers.

- An assistant professor of psychology, for which the Department of Humanities currently has an active search and anticipates making a hire to begin in Fall 2020. Per the job requisition, "Candidates should have a Ph.D. in psychology, behavioral sciences, human-computer interaction, or closely related field.... Areas of specialization include virtual reality, artificial intelligence, social media, online-identity formation, antisocial or addictive behavior, and learning sciences." The search committee for this position, chaired by Dr. Maurie Cohen, has already approved and moved forward with external advertising for the position; the committee convened for the first round of applicant reviews in November and is moving towards the interview stage.

In addition to the above positions, other current fulltime NJIT academic and instructional staff are also currently involved in providing support to the option in a myriad of ways. Dr. Neel Khichi, university lecturer in the Department of Humanities, was responsible for originally developing STS 359: Cyberpsychology, the course out of which the current option ultimately grew. Furthermore, Dr. Khichi proposed and developed the content for a course in social psychology, which was originally taught as a special topics course before being approved as a permanent, recurring course housed within the department (i.e., STS 321: Social Psychology). Dr. Khichi has an Ed.D. with a focus in education, culture, and society from Rutgers University. His research interests include techno-social identity development as well as the relationship between education, social issue awareness, and metacognition.

Dr. John Wolf, assistant dean of the College of Science & Liberal Arts, spent his first 4.5 years at NJIT as a university lecturer in the Science, Technology & Society program teaching classes in general psychology, multiculturalism, and quantitative research methods. Although Dr. Wolf has transitioned to a fulltime staff role, he still remains intimately involved in the cyberpsychology option, teaching numerous core courses each year and providing administrative support to grow and enroll the option. Dr. Wolf has a Ph.D. in mass communications with a focus in complex modeling from Syracuse University. His research interests include human-computer interaction and the quantitative study of identity, culture, and social systems.

Other fulltime faculty and instructional staff within the Department of Humanities also possess relevant expertise in order to make unique contributions to a standalone cyberpsychology degree program. Dr. Nancy Steffen-Fluhr, associate professor and director of the Murray Center for Women in Technology, teaches courses in gender and technology, science fiction, and computer-mediated collaborative writing; her research explores the relationship between gender and technology as interdependent social constructs, with a special interest in how gender and sex are depicted in U.S. film and television. Dr. Theresa Hunt, senior university lecturer, teaches research methods. Her research focuses on gender studies and the sociology of technology. Dr. Megan O'Neill, assistant professor and director of First-Year Writing, focuses on the assessment of educational programs with particular emphasis on operationalizing programmatic and institutional recommendations formed on the basis of empirical evidence vis-à-vis assessment outcomes.

VI.C. Libraries & Computing Facilities

NJIT's libraries and computing facilities are satisfactory for the purposes of the proposed B.S. in Cyberpsychology. Van Houten Library offers access to numerous databases and peer-reviewed journals, although—depending on the program's needs—access to some additional domain-specific databases (e.g., PsycTESTS) may be necessary over time; resources with particular applicability to the proposed program includes, but is not limited to:

- Communication & Mass Media Complete
- Educational Resources Information Center (ERIC) – Education Social Science
- JSTOR – Essential Collection and Life Sciences Collections
- OmniFile Full Text Mega
- PsycARTICLES
- Scopus
- Stastista

NJIT's Department of Information Services and Technology (IST) maintains over 500 computers across eight (8) public labs, configured with a variety of operating systems and software applications. Public computing labs are centrally managed and can be accessed by all current NJIT students, faculty, and staff. IST also provides students, faculty, and staff access to an extensive list of software available for a variety operating systems. NJIT-issued software with particular applicability to the proposed program include Mathematica, Minitab, Statistical

Analytical Software (SAS), and Statistical Package for the Social Sciences (SPSS).

VI.D. Classrooms & Laboratories

NJIT has sufficient classroom and computer laboratory space to handle the pedagogical needs of the proposed B.S. in Cyberpsychology. Existing courses within the curriculum (e.g., STS 307: Quantitative Research Methods) are already regularly scheduled for class meetings to take place in one of the institution's many instructional computer labs.

VII. DEGREE REQUIREMENTS

Although there is no formal accrediting body for baccalaureate degree programs in psychology, the American Psychological Association (APA) offers a number of curricular resources for undergraduate programs in the field. One such resource, the APA Guidelines for the Undergraduate Psychology Major, was instrumental in formulation the proposed program's goals, objectives, outcomes, and assessment. Another APA resource that has been critical in configuring the proposed program's curriculum is the data collected from the 2014 Undergraduate Study in Psychology (USP). Commissioned by the APA's Board of Educational Affairs in response to calls for developing a national database on undergraduate psychology programs, the results were summarized in a "Undergraduate Study in Psychology: Curriculum and Assessment" (Norcross, Hailstorks, Aiken, Pfund, Stamm, & Christidis, 2016), published in *American Psychologist*, the official peer-reviewed academic journal of the APA.

According to data collected from 336 participating institutions, the average number of credits required to earn a Bachelor of Science in Psychology was 39.16 (SD = 7.77), or approximately 13 three-credit courses (Norcross, Hailstorks, Aiken, Pfund, Stamm, & Christidis, 2016, p. 93). The curriculum for the proposed program requires 13 three-credit courses and 2 one-credit courses in the behavioral and psychological sciences, for a total of 15 subject area courses totaling 41 credit hours.

The 2014 study found that 99% of undergraduate psychology programs offer discrete courses in the following domains: abnormal psychology; developmental psychology; introduction to psychology; research methods; and social psychology. Research methods and statistics were required nearly all of the programs, and capstone courses as well as courses in orientation to the subject area were required by approximately 67% of programs that offered these courses. The study further found that relatively few undergraduate psychology courses offered accompanying labs.

The cyberpsychology curriculum requires a course in abnormal psychology (PSY 389: Psychopathologies); an introduction to psychology course (STS 210: General Psychology); two research methods courses (STS 304: Qualitative Research Methods and STS 307: Quantitative Research Methods); a course in statistics (MATH 105: Elementary Probability & Statistics); and a course in social psychology (STS 321: Social Psychology). Furthermore, in support of the program's classification as a STEM program, the required research methods courses both have accompanying co-requisite labs (STS 304A: Qualitative Research Methods Lab and STS 307A: Quantitative Research Methods Lab), which will emphasize skill acquisition and application. Finally, the cyberpsychology curriculum requires both an orientation's course (PSY 201: Orientation to Psychology as a Behavioral Science) as well as a senior capstone course, for which students may choose one of three options in order to fulfill dependent on their professional aspirations (PSY 490: Co-op Work Experience; PSY 491: Research & Independent Study; or PSY 495: Senior Seminar in Behavioral & Psychological Sciences).

In addition to the above areas, all undergraduate degree-seeking NJIT students must satisfy the university's General Education Requirements (GER). The GER is comprised of five thematic areas of knowledge and skills that the university has deemed necessary in order to improve and deepen

students' critical thinking beyond the scope of their degree program. The thematic areas and corresponding requisite credit hours are as follows:

- Liberal Arts Literacy (18 credit hours)
- Computational Literacy (3 credit hours)
- Social Science Literacy (3 credit hours)
- Scientific Literacy (7 credit hours)
- Quantitative Reasoning/Mathematics (6 credit hours)

The core requirements of the curriculum for the proposed cyberpsychology program will satisfy the Social Science Literacy as well as 6 credit hours of the Liberal Arts Literacy components of the GER.

The curriculum for the B.S. in Cyberpsychology requires 120 credit hours of coursework in order to be certified for graduation.

For a full summary of the curriculum, in the form of semester-by-semester course grids, please see Figure 2.

Figure 2. Bachelor of Science in Cyberpsychology, 120 Credit Hours

FIRST YEAR: FALL		16 hrs
FRSH SEM	Freshman Seminar	0 hrs
HUM 101	Writing, Speaking, Thinking I	3 hrs
MATH 101	Math for the Liberal Arts	3 hrs
PSY 201	Orientation to Psychology	3 hrs
STS 210	General Psychology	3 hrs
Scientific Literacy GER Elective I		3 hrs
Scientific Literacy GER Elective I Lab		1 hr

FIRST YEAR: SPRING		15 hrs
HUM 102	Writing, Speaking, Thinking II	3 hrs
MATH 105	Intro. to Probability & Statistics	3 hrs
PSY 215	Biology of Behavior	3 hrs
Computing Literacy GER		3 hrs
Scientific Literacy GER Elective II		3 hrs

SECOND YEAR: FALL		12 hrs
IS 247	Designing the User Experience	3 hrs
STS 321	Social Psychology	3 hrs
STS 359	Foundations of Cyberpsychology I	3 hrs
History and Humanities GER 200 level		3 hrs

SECOND YEAR: SPRING		15 hrs
STS 339	Psychology of Diversity	3 hrs
STS 350	Computers, Society & Ethics	3 hrs
STS 361	Foundations of Cyberpsychology II	3 hrs
Free Elective I		3 hrs
Free Elective II		3 hrs

THIRD YEAR: FALL		16 hrs
IS 333	Social Network Analysis	3 hrs
PSY 375	AI and the Human Mind	3 hrs
STS 304	Qualitative Research Methods	3 hrs
STS 304A	Qualitative Research Methods Lab	1 hr
Free Elective III		3 hrs
Free Elective IV		3 hrs

THIRD YEAR: SPRING		16 hrs
IS 375	Enhancing User Experience	3 hrs
PSY 333	Principles of Psychometrics	3 hrs
STS 307	Quantitative Research Methods	3 hrs
STS 307A	Quantitative Research Methods Lab	1 hr
STS 351	Minds and Machines	3 hrs
Free Elective V		3 hrs

FOURTH YEAR: FALL		15 hrs
IS 448	Usability & Measuring UX	3 hrs
PSY 389	Psychopathology	3 hrs
Free Elective VI		3 hrs
Free Elective VII		3 hrs
Free Elective VIII		3 hrs

FOURTH YEAR: SPRING		15 hrs
PSY 49X	Capstone in Psychology	3 hrs
Humanities and Social Science Senior Seminar GER		3 hrs
Free Elective IX		3 hrs
Free Elective X		3 hrs
Free Elective XI		3 hrs

VIII. REFERENCES

American Psychological Association. (2013). *APA guidelines for the undergraduate psychology major: Version 2.0*. Retrieved from https://www.apa.org/ed/precollege/about/psymajor-guidelines.pdf

American Psychological Association. (2019). *Degrees in Psychology* [Interactive data tool]. Retrieved from https://www.apa.org/workforce/data-tools/degrees-psychology.aspx

Appleby, D. C. (2018). Preparing psychology majors to enter the workforce: Then, now, with whom, and how. *Society for the Teaching of Psychology*, *45*(1), 14-23.

Bureau of Labor Statistics. (2019, September 4). *Occupational outlook handbook*. Retrieved from https://www.bls.gov/ooh/home.htm

Carnevale, A. P., Cheah, B., & Hanson, A. R. (2015). *The economic value of college majors*. Georgetown University Center on Education and the Workforce. Retrieved from https://cew.georgetown.edu/cew-reports/valueofcollegemajors

Christidis, P., Conroy, J., Lin, L., & Stamm, K. (2019). Psychology faculty salaries for the 2018-2019 academic year. Retrieved from https://www.apa.org/workforce/publications/19-faculty-salary/

Christidis, P., Lin, L., & Conroy, J. (2019). The growth of psychology baccalaureate slows. *Monitor on Psychology*, *50*(5), 21.

College Board (2007a). *2007 college-bound seniors: Total group profile report*. Retrieved from http://media.collegeboard.com/digitalServices/pdf/research/cb-seniors-2007-national-report.pdf

College Board (2007b). *2007 college-bound seniors state profile report: New Jersey*. Retrieved from http://media.collegeboard.com/digitalServices/pdf/research/cb-seniors-2007-NJ.pdf

College Board (2019a). *2019 SAT suite of assessments annual report: Total group*. Retrieved from https://reports.collegeboard.org/pdf/2019-total-group-sat-suite-assessments-annual-report.pdf

College Board (2019b). *2019 SAT suite of assessments annual report: New Jersey*. Retrieved from https://reports.collegeboard.org/pdf/2019-new-jersey-sat-suite-assessments-annual-report.pdf

College Board (2019c). 2019-2020 SAT and SAT subject tests international code list. Retrieved from https://collegereadiness.collegeboard.org/pdf/sat-international-code-list.pdf

Department of Homeland Security. (2016). *STEM designated degree program list*. Retrieved from https://www.ice.gov/sites/default/files/documents/Document/2016/stem-list.pdf

Federal Reserve Bank of New York. (2019). Labor Market Outcomes of College Graduates by Major [Interactive data tool]. Retrieved from https://www.newyorkfed.org/research/college-labor-market/college-labor-market_compare-majors.html

National Center for Education Statistics. (2018a). *Bachelor's degrees conferred by postsecondary institutions, by field of study: Selected years, 1970-71 through 2016-17* [Data file]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_322.10.asp

National Center for Education Statistics. (2018b). *Number of faculty in degree-granting postsecondary institutions, by employment status, sex, control, and level of institution: Selected years, fall 1970 through fall 2017* [Data file]. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_315.10.asp

New Jersey Institute of Technology. (2019a). *Annual Institutional Profile Report*. Retrieved from https://www5.njit.edu/oie/content/institutional-profle/

New Jersey Institute of Technology. (2019b). *Building a Strong Foundation—NJIT 2025*. Retrieved from https://www.njit.edu/strategicplan/njit-2025

Norcross, J. C., Hailstorks, R., Aiken, L. S., Pfund, R. A., Stamm, K. E., & Christidis, P. (2016). Undergraduate study in psychology: Curriculum and assessment. *American Psychologist, 71*(2), 89-101.

Projections Central. (n.d.). *Employment projection sources*. Retrieved from https://projectionscentral.com/

Roy, J. (2018). *Engineering by the numbers: 2017*. Retrieved from https://www.asee.org/documents/papers-and-publications/publications/college-profiles/2017-Engineering-by-Numbers-Engineering-Statistics.pdf

Roy, J. (2019). *Engineering by the numbers: 2018*. Retrieved from https://ira.asee.org/wp-content/uploads/2019/07/2018-Engineering-by-Numbers-Engineering-Statistics-UPDATED-15-July-2019.pdf

Schwartz, B. M., Gregg, V. R., & McKee, M. (2018). Conversations about careers: Engaging Students in and out of the classroom. *Teaching of Psychology*, *45*(1), 50–59.

Widman, J. (2018). The emergence of cyberpsychology. Retrieved from https://cacm.acm.org/news/229668-the-emergence-of-cyberpsychology/fulltext