NJIT
New Jersey Institute of Technology

Annual Institutional Profile Report
2022

Submitted to the
New Jersey
Office of the Secretary of Higher Education
by
The Office of Institutional Effectiveness
New Jersey Institute of Technology

September 2022

August 23, 2022

New Jersey Institute of Technology (NJIT) takes great pride in presenting this Institutional Profile to the State of New Jersey. This report highlights our efforts in education, scholarly and applied research, economic development, and engagement during Fiscal Year 2022.

Thanks to the efforts of our dedicated faculty and staff, NJIT continues to be recognized as a top university, as well as for our excellent return on investment that facilitates upward socio-economic mobility, by ranking agencies including *U.S. News and World Report*, *The Princeton Review*, *Forbes,* and *Payscale*.

Our 140 labs, centers, and institutes strive to lead in five areas of multidisciplinary research: bioscience and bioengineering, data science and management, environment and sustainability, material science and engineering, and robotics and machine intelligence. As a result, our status as a Very High (R1) Research Activity doctoral institution was reaffirmed by the Carnegie Classification of Institutions of Higher Education, placing NJIT among 146 of the most elite and productive research institutions in the nation and one of three in New Jersey.

NJIT is committed to continuing and expanding our contributions to our state, the nation, and the world. We continue to support our host city of Newark through a number of initiatives including guiding a regional coalition to propose Greater Newark Smart Port Regional Growth Cluster as part of the Build Back Better Regional Challenge. We have also made a commitment to sustainability. NJIT has been ranked among the top 100 institutions globally by The *Times Higher Education Impact* rankings, based on the United Nation's Sustainable Development Goals.

This Institutional Profile Report highlights NJIT's continuing commitment to the State of New Jersey and to its citizens. All information supplied in this document is, to the best of my knowledge, complete and accurate.

Sincerely on behalf of NJIT,

Teik C. Lim
President

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SECTION I – NEW JERSEY INSTITUTE OF TECHNOLOGY

New Jersey Institute of Technology (NJIT) was founded in 1881 as the Newark Technical School, becoming the Newark College of Engineering in 1930. Today, NJIT has six schools and colleges: Newark College of Engineering (1930), the Hillier College of Architecture and Design (1973), the College of Science and Liberal Arts (1982), the Martin Tuchman School of Management (1988), the Albert Dorman Honors College (1993), and the Ying Wu College of Computing (2001).

NJIT has evolved from a commuter school teaching applied engineering skills to a top 50 public university. This evolution has been achieved through an aggressive faculty recruitment plan matched by an extensive building effort that doubled the size of the main campus over the past decade and added major research facilities for environmental engineering and science, advanced manufacturing, microelectronics, and life sciences. Enrollment increased from 6,300 students in 1979 (the first year for which there is publicly available federal data) to over 13,600 students in 2021. Total research expenditures in fiscal year 2021 amounted to over $166 million.

At the same time, NJIT remains true to its urban mission and its commitment to helping motivated and talented students overcome educational challenges. The institution has been ranked highly by *Money*, *The Princeton Review*, *Payscale*, and *Forbes* for career placement, early and mid-career earnings, return on investment, value, and upward economic mobility.

NJIT's 48-acre, computing-intensive, residential campus is located in the University Heights section of Newark, less than 10 miles from New York City and Newark International Airport. It is easily reached by interstate highways and public transportation. Graduate, undergraduate, and continuing education classes are offered at the main campus, at extension sites at colleges and other locations throughout New Jersey, and increasingly through a variety of distance learning formats.

I.A.1 – Our Vision

To be a preeminent public polytechnic research university with local and global impact.

I.A.2 – Our Mission

NJIT, the state's public polytechnic research university, is committed to excellence and global impact through:

- **Education:** Preparing diverse students for positions of leadership as professionals and as citizens through innovative curricula, committed faculty, and expansive learning opportunities
- **Research:** Advancing knowledge to address issues of local, national, and global importance with an emphasis on high impact basic, applied, and transdisciplinary scholarship
- **Economic Development:** Anticipating the needs of business, government, and civic organizations to foster growth, innovation, and entrepreneurship
- **Engagement:** Applying our expertise to build partnerships, serve our community, and benefit society as a whole

These four elements guide NJIT in contributing solutions for the grand challenges of the future and improving the quality of life today.

I.A.3 – Our Core Values

- **Excellence:** We innovate in the pursuit of excellence in all that we do and continue to improve in order to meet and sustain the highest standards of performance.
- **Integrity:** We are honest and ethical in all we do, keep our promises, and acknowledge our mistakes.
- **Civility:** We treat each other with respect and with dignity.
- **Sustainability:** We develop responsibly and respect the needs of future generations.
- **Social Responsibility:** We pride ourselves on engagement and partnerships to enhance the communities in which we live.
- **Diversity:** We celebrate the inclusiveness of our university community and are sensitive to cultural and personal differences. We do not tolerate discrimination in any form.
- **Communication:** We strive to share information and understand each other's perspectives.

SECTION II – DATA BY CATEGORY

A. Accreditation Status

II.A.1 Institutional Accreditation

New Jersey Institute of Technology as an institution is accredited by the following organization: Middle States Commission on Higher Education (MSCHE)

STATEMENT OF ACCREDITATION STATUS

The Statement of Accreditation Status (SAS) is the official statement of the Middle States Commission on Higher Education (MSCHE) about each institution's current accreditation status and scope of accreditation. The SAS also provides a brief history of the actions taken by the Commission.

Institution:	**NEW JERSEY INSTITUTE OF TECHNOLOGY** Newark, NJ
Address:	University Heights Newark, NJ 07102-1982
Phone:	(973) 596-3000
URL:	www.njit.edu
Accreditation Liaison Officer (ALO):	Dr. Eugene Deess
Commission Staff Liaison:	Dr. Melissa Hardin, Vice President

Accreditation Summary

*For more information, see the Commission's **Accreditation Actions Policy and Procedures**.*

Phase: Accredited

Status: Accreditation Reaffirmed

Accreditation Granted: 1934

Last Reaffirmation: 2022

Next Self-Study Evaluation: 2029-2030

Next Mid-Point Peer Review: 2026

Alternative Delivery Methods

The following represents approved alternative delivery methods included in the scope of the institution's accreditation:

Distance Education
Approved to offer programs by this delivery method

Correspondence Education
Not approved for this delivery method

Credential Levels

⊘ **Approved Credential Levels**

The following represents credential levels included in the scope of the institution's accreditation:

- **Bachelor's Degree or Equivalent**
  Included within the scope:

- **Post-baccalaureate Certificate**
  Included within the scope:

- **Master's Degree or Equivalent**
  Included within the scope:

- **Doctor's Degree- Research/Scholarship**
  Included within the scope:

Locations

The following represents branch campuses, additional locations, and other instructional sites that are included within the scope of the institution's accreditation:

Location	Type
Beijing University of Technology Beijing China	Additional Location
NJIT@Egypt 1 NJIT Bloomfields Mostakbal City (Arab Contractors) Eastern Lotus Extension Bloomfields Mostakbal City, New Cairo 11111	Additional Location
NJIT@Jersey City 101 Hudson St Jersey City, NJ 07302	Additional Location
Bergen County Technical High School 504 Route 46 West Teterboro, NJ 07608	Other Instructional Site
Cranford High School 201 West End Place Cranford, NJ 07016	Other Instructional Site
Delaware Valley Regional High School 19 Senator Stout Road Frenchtown, NJ 08825	Other Instructional Site
Donald M. Payne Sr. School Of Technology 498-544 W Market St. Newark, NJ 07107	Other Instructional Site
East Orange STEM Academy 129 Renshaw Avenue East Orange, NJ 07017	Other Instructional Site
East Side High School 238 Van Buren Street Newark, NJ 07105	Other Instructional Site

Essex County Newark Tech 91 West Market Street Newark, NJ 07103	Other Instructional Site
Freehold High School 2 Robertsville Rd Freehold, NJ 07728	Other Instructional Site
Glen Ridge High School 200 Ridgewood Avenue Glen Ridge, NJ 07028	Other Instructional Site
Hanover Park High School 63 Mt. Pleasant Ave East Hanover, NJ 07936	Other Instructional Site
High Point Regional High School 299 Pidgeon Hill Road Sussex, NJ 07461	Other Instructional Site
High Tech High School One High Tech Way North Bergen, NJ 07047	Other Instructional Site
Hillside High School 195 Virginia Street Hillside, NJ 07205	Other Instructional Site
Hoboken High School 800 Clinton Street Hoboken, NJ 07039	Other Instructional Site
John E. Dwyer Technology Academy 123 Pearl Street Elizabeth, NJ 07201	Other Instructional Site

Livingston High School 30 Robert Harp Drive Livingston, NJ 07039	Other Instructional Site
Mahwah High School 50 Ridge Road Mahwah, NJ 07430	Other Instructional Site
Manasquan High School 167 Broad Street Manasquan, NJ 08736	Other Instructional Site
Marion P. Thomas Charter School 125 Sussex Ave. Newark, NJ 07103	Other Instructional Site
Middlesex County Vocational & Technical School - East Brunswick Campus 112 Rues Ln. East Brunswick, NJ 08816	Other Instructional Site
Northern Highlands Regional High School 298 Hillside Avenue Allendale, NJ 07642	Other Instructional Site

o Freehold Township High School 281 Elton-Adelphia Road Freehold, NJ 07728	Other Instructional Site
Ocean County Vocational Technical School 137 Bey Lea Road Toms River, NJ 08753	Other Instructional Site
Ocean Township High School 163 Monmouth Road Oakhurst, NJ 07755	Other Instructional Site
Parsippany High School 309 Baldwin Rd Parsippany, NJ 07054	Other Instructional Site
Parsippany Hills High School 20 Rita Dr Morris Plains, NJ 07950	Other Instructional Site
Paterson Charter School for Science and Technology 196 West Railway Ave. Paterson, NJ 07503	Other Instructional Site
Pequannock Township High School 85 Sunset Road Pompton Plains, NJ 07444	Other Instructional Site
Perth Amboy High School 300 Eagle Ave. Perth Amboy, NJ 08861	Other Instructional Site
Philip□s Academy Charter School of Newark 342 Central Avenue Newark, NJ 07103	Other Instructional Site
Pioneer Academy 164 Totowa Road Wayne, NJ 07470	Other Instructional Site

Roselle Park High School 510 Chestnut Street Roselle Park, NJ 07204	Other Instructional Site
Saddle Brook High School 355 Mayhill Street Saddle Brook, NJ 07663	Other Instructional Site
South Brunswick High School 750 Ridge Road Monmouth Junction, NJ 08852	Other Instructional Site
Sparta High School 70 West Mountain Road Sparta, NJ 07871	Other Instructional Site
STEM Innovation Academy of the Oranges 445 Scotland Road South Orange, NJ 07079	Other Instructional Site
Sussex County Technical School 105 North Church Rd Sparta, NJ 07871	Other Instructional Site

The Academy for Math, Science & Engineering- Morris County 520 W Main St Rockaway, NJ 07866	Other Instructional Site
Thomas Edison EnergySmart Charter School 150 Pierce St, 2nd Floor Somerset, NJ 08873	Other Instructional Site
Wayne Valley High School 551 Valley Rd. Wayne, NJ 07470	Other Instructional Site
Whippany Park High School 165 Whippany Road Whippany, NJ 07981	Other Instructional Site
Woodbridge Township District High School (Colonia High School) 180 East Street Colonia, NJ 07067	Other Instructional Site

Definitions: For definitions of branch campus, additional locations, or other instructional sites, see the **Commission's Substantive Change Policy and Procedures**.

Accreditation Actions

The following represents the MSCHE accreditation actions taken in the last ten (10) years. For more information, see the **Commission's Accreditation Actions Policy and Procedures** *and* **the Substantive Change Policy and Procedures**.

June 23, 2022   To acknowledge receipt of the self-study report. To note that the institution hosted a virtual site visit in lieu of an on-site visit in accordance with the United States Department of Education (USDE) guidelines published March 17, 2020. To reaffirm accreditation. To request a supplemental information report, due April 1, 2023, documenting further evidence of the implementation of organized and systematic assessments that evaluate the extent of student achievement in general education (Standard V). To note that a verification visit is required by USDE guidelines and will be conducted within a reasonable period of time following the virtual site visit. The next evaluation visit is scheduled for 2029-2030.

April 28, 2022   To acknowledge receipt of the substantive change request. To include the additional location at 1 NJIT, Bloomfields, Mostakbal City (Arab Contractors), Eastern Lotus Extension, New Cairo, Egypt within the institution's scope of accreditation. To require written evidence of approvals from all necessary licensing, regulatory, or other legal entities as necessary, including the New Jersey Secretary of Higher Education, Egyptian Ministry of Education, and Egyptian Office of the President. To require immediate notification when instruction commences at the additional location. To note that the Commission may rescind this action if instruction does not commence within one calendar year from the date of this action. To note that the evaluation visit has occurred and will be acted upon by the Commission at the June meeting.

June 17, 2020   To acknowledge receipt of the substantive change request. To note the institution's decision to close the additional location at 1200 Old Trenton Road, Windsor, NJ 08550. To require immediate notification when instruction ceases at the additional location. To note that the Commission reserves the right to rescind approval of this substantive change if any developments reveal additional information that might have affected the Commission's decision and/or the requested substantive change is not implemented within one calendar year from the date of this action. The next evaluation visit is scheduled for 2021-2022.

April 30, 2019   To acknowledge receipt of the substantive change request. To include the additional location at NJIT@Jersey City, 101 Hudson Street, Jersey City, NJ 07302 within the institution's scope of accreditation. To note that the Commission may rescind this action if instruction does not commence within one calendar year from the date of this action. The next evaluation visit is scheduled for 2021-2022.

November 16, 2017   To accept the Periodic Review Report, to reaffirm accreditation, and to commend the institution for the quality of the report and the PRR process. The next evaluation visit is scheduled for 2021-2022.

July 5, 2017   To acknowledge receipt of the substantive change request. To include the additional location at Mercer County Community College, 1200 Old Trenton Road, Windsor, NJ 08550 within the scope of the institution's accreditation. The Commission requires written notification within thirty days of the commencement of operations at this additional location. Operations at the additional location must commence within one calendar year from the date of this action. To note that the Periodic Review Report has been received and will be acted upon by the Commission at the November meeting.

March 6, 2014   To accept the progress report. The Periodic Review Report is due June 1, 2017.

August 1, 2013   To note the institution never opened the additional locations in Kochi, India and Thiruvanathpuram, India. To also note that approval has lapsed and to remove the contractual agreement with NeST Group of Companies and these additional locations from the institution's accreditation.

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Information about the Middle States Commission on Higher Education

The Middle States Commission on Higher Education (MSCHE) is one of seven institutional accrediting organizations in the United States and is recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation (CHEA). MSCHE accreditation applies to an institution as a whole rather than the specific programs within an institution. MSCHE does not approve or accredit individual programs. The MSCHE accreditation review cycle is continuous and accreditation does not expire. Each institution is reevaluated and monitored on a regular and consistent basis in accordance with the institution's assigned accreditation review cycle and Commission policy and procedures. An institution maintains its accreditation unless it is voluntarily surrendered or withdrawn by the Commission for cause, after the institution has been afforded due process. The institution's current accreditation phase and accreditation status are displayed on the institution's listing in the Institution Directory and in the Statement of Accreditation Status (SAS).

II.A.2 Professional Accreditation

Association to Advance Collegiate Schools of Business (AACSB)

Accreditation Board for Engineering and Technology (ABET)

Council for Interior Design Accreditation (CIDA)

National Architectural Accrediting Board (NAAB)

National Association of Schools of Art and Design (NASAD)

B. Number of Students Served

NJIT served 11,901 enrolled students in the fall of 2021.

II.B.1 Number of Undergraduate Students by Attendance Status

Table II.B.1
UNDERGRADUATE ENROLLMENT BY ATTENDANCE STATUS, FALL 2021

	Number	Percent
Full-time	7,305	79.5%
Part-time	1,878	20.5%
Total	9,183	100%

II.B.2 Number of Graduate Students by Attendance Status

Table II.B.2
GRADUATE ENROLLMENT BY ATTENDANCE STATUS, FALL 2021

	Number	Percent
Full-time	1,581	58.2%
Part-time	1,137	41.8%
Total	2,718	100%

II.B.4 FY2021 (12-Month) Unduplicated Enrollments

Table II.B.4
UNDUPLICATED ENROLLMENT, FY2021 (IPEDS 12-MONTH)

	Number	Credit Hours	FTE
Undergraduate	10,441	250,222	8,341
Graduate	3,246	35,429	1,476
Total	13,687	285,651	9,817

C. Characteristics of Undergraduate Students

A total of 11,518 individuals applied for admission as first-time freshmen to NJIT for fall 2021.

II.C.1 Mean Math and Evidence-Based Reading & Writing SAT Scores

Fall 2021 freshmen entered NJIT as either regular admits or Educational Opportunity Fund (EOF) admits. By admitting students using different admissions categories, the university provides opportunities to a broader range of students.

Table II.C.1 contains information on the average SAT scores of NJIT's fall 2021 enrolled full-time and part-time first-time freshmen. It should be noted that the first-time, full-time freshman population differs slightly from the cohort of first-time, full-time undergraduates who are tracked for federal reporting purposes using the IPEDS Graduation Rate Survey (GRS). This is because the IPEDS cohort also includes first-time, full-time students who are admitted above the freshman level because of advanced placement credits.

Table II.C.1
MEAN MATH, READING, AND WRITING SAT SCORES FOR FIRST-TIME FRESHMEN BY ADMISSION STATUS AND OVERALL, FALL 2021

Full-Time Students				
	ERW*	N	Math	N
Regular Admits	636	476	672	476
EOF Admits	571	29	596	29
Special Admits	0	0	0	0
All Admits	632	505	668	505
Missing Scores		673		673

Part-Time Students				
	ERW*	N	Math	N
Regular Admits	592	29	608	29
EOF Admits	524	5	506	5
Special Admits	0	0	0	0
All Admits	582	34	593	34
Missing Scores		97		97

*Note: ERW is Evidence-Based Reading & Writing.

II.C.2 Enrollment in Remediation Courses by Subject Area

No (0.0%) first-time, full-time students required remediation.

Table II C.2
ENROLLMENT IN REMEDIATION COURSES

Total Number of Undergraduate Students Enrolled in Fall 2021

Total Fall 2021 Undergraduate Enrollment	Number of Students Enrolled in One or More Remedial Courses	Percent of Total
9,183	61	0.7%

Total Number of First-Time, Full-Time (FTFT) Students Enrolled in Remediation in Fall 2021

Total Fall Number of FTFT Students	Number of FTFT Students Enrolled in One or More Remedial Courses	Percent of FTFT Enrolled in One or More Remedial Courses
1,235	44	3.6%

First-Time, Full-Time (FTFT) Students Enrolled in Remediation in Fall 2021 by Subject Area

Subject Area	Number of FTFT Enrolled In:	Percent of FTFT Enrolled In:
Computation	0	0.0%
Algebra	0	0.0%
Reading	0	0.0%
Writing	0	0.0%
English	44	3.6%

II.C.3 Race/Ethnicity, Sex, and Age

In the fall of 2021, 11,901 students enrolled in various programs at New Jersey Institute of Technology. Seventy-seven percent (9,183) of these students enrolled at the undergraduate level.

Eighty-percent of undergraduates enrolled as full time, and twenty-seven percent of undergraduates were female. The majority of undergraduates were from the state of New Jersey.

Table II.C.3.a
UNDERGRADUATE ENROLLMENT BY RACE/ETHNICITY: FALL 2021

	Full-Time		Part-Time		Total	
	N	Percent	N	Percent	N	Percent
White	2,412	33.0%	384	20.4%	2,796	30.4%
Black	664	9.1%	156	8.3%	820	8.9%
Hispanic	1,593	21.8%	329	17.5%	1,922	20.9%
Asian*	1,726	23.6%	240	12.8%	1,966	21.4%
American Indian	8	0.1%	3	0.2%	11	0.1%
Alien	457	6.3%	58	3.1%	515	5.6%
Unknown	445	6.1%	708	37.7%	1,153	12.6%
Total*	7,305	100.0%	1,878	100.0%	9,183	100.0%

Asian includes Pacific Islanders and Unknown includes 2 or More Races.

Table II.C.3.b
UNDERGRADUATE ENROLLMENT BY SEX: FALL 2021

	Full-Time		Part-Time		Total	
	N	Percent	N	Percent	N	Percent
Male	5,444	74.5%	1,296	69.0%	6,740	73.4%
Female	1,861	25.5%	582	31.0%	2,443	26.6%
Total	7,305	100.0%	1,878	100.0%	9,183	100.0%

Table II.C.3.c
UNDERGRADUATE ENROLLMENT BY AGE: FALL 2021

	Full-Time		Part-Time		Total	
	N	Percent	N	Percent	N	Percent
Less than 18	20	0.3%	424	22.6%	444	4.8%
18-19	2,105	28.8%	290	15.4%	2,395	26.1%
20-21	2,688	36.8%	208	11.1%	2,896	31.5%
22-24	1,756	24.0%	442	23.5%	2,202	24.2%
25-29	559	7.7%	302	16.1%	861	9.4%
30-34	133	1.8%	115	6.1%	248	2.7%
35-39	23	0.3%	47	2.5%	70	0.8%
40-49	14	0.2%	37	2.0%	51	0.6%
50-64	6	0.1%	12	0.7%	19	0.2%
65 and more	1	0.0%	0	0.0%	1	0.0%
Unknown	0	0.0%	0	0.0%	0	0.0%
Total*	7,305	100.0%	1,878	100.0%	9,183	100.0%

Some totals may be higher than 100.0% due to rounding.

II.C.4 Numbers of Students Receiving Financial Assistance under Each Federal-, State-, and Institution-Funded Aid Program

During the 2020-2021 academic year, undergraduates at NJIT received financial aid from multiple sources, i.e. Federal, State, institution, and other private sources. Aid was provided in the form of scholarships, grants, loans, and waivers.

Table II.C.4
FINANCIAL AID FROM FEDERAL, STATE, & INSTITUTION-FUNDED PROGRAMS, AY2020-2021

Federal Programs	Recipients	Dollars ($)	$ / Recipient
Pell Grants	3,623	$17,992,000	4,966.05
College Work Study	291	$471,000	1,618.56
Perkins Loans	0	$0	-
SEOG	1,612	$535,000	331.89
PLUS Loans	323	$5,700,000	17,647.06
Stafford Loans (Subsidized)	3,042	$13,090,000	4,303.09
Stafford Loans (Unsubsidized)	2,769	$10,718,000	3,870.71
SMART & ACG or Other	0	$0	-
CARES ACT- HEERF Student Aid	808	$584,000	722.77

State Programs	Recipients	Dollars ($)	$ / Recipient
Tuition Aid Grants (TAG)	3,112	$25,044,000	8,047.56
Educational Opportunity Fund (EOF)	488	$731,000	1,497.95
Other State Programs (OSRP, NJ-GIVS, WTC, etc.)	0	$0	-
Distinguished Scholars	0	$0	-
Urban Scholars	17	$16,000	941.18
NJ STARS	38	$88,000	2,315.79
CCOG	0	$0	-
NJCLASS Loans	87	$1,098,000	12,620.69

Institutional Programs	Recipients	Dollars ($)	$ / Recipient
Grants/Scholarships	3,578	$36,808,000	10,287.31
Loans	0	$0	-

II.C.5 Percentage of Students Who Are New Jersey Residents

Ninety-two percent of first-time undergraduates were from the state of New Jersey in the fall 2021 cohort.

Table II.C.5
Fall 2021 First-Time Undergraduate Enrollment by State Residence

State Residents*	Non-State Residents	Total	% State Residents
1,267	107	1,374	92.2%

Residence unknown included with New Jersey residents

D. Student Outcomes

The one-year retention rate of first-time, full-time freshmen (fall 2021 cohort) is 88%, and the six-year graduation rate has increased by 4% to a total of 74% for the fall 2015 cohort.

II.D.1 Graduation Rates

Table II.D.1.a
FOUR-, FIVE- AND SIX-YEAR GRADUATION RATE OF FALL 2015 FULL-TIME, FIRST-TIME DEGREE/CERTIFICATE SEEKING STUDENTS

Race/Ethnicity		Graduated in 4 Years		Graduated in 5 Years		Graduated in 6 Years	
	Cohort Size	N	Percent	N	Percent	N	Percent
American Ind.	1	0	0.0%	1	100.0%	1	100.0%
Asian	266	133	58.8%	170	75.2%	180	79.6%
Black	53	12	22.6%	29	54.7%	33	62.3%
Hispanic	191	49	25.7%	98	51.3%	123	64.4%
Pacific Islander	3	1	33.3%	2	66.7%	3	100.0%
Non-Resident	46	14	30.4%	22	47.8%	38	82.6%
International	43	11	25.6%	21	48.8%	30	69.8%
2 or More Races	17	5	29.4%	9	52.9%	14	82.4%
White	397	151	38.0%	223	56.2%	298	75.1%
Total	977	376	38.5%	575	58.9%	720	73.7%

II.D.2 Third-Semester Retention Rates

Table II.D.2.a
THIRD-SEMESTER RETENTION OF FIRST-TIME UNDERGRADUATES BY ATTENDANCE STATUS, FALL 2020 TO FALL 2021

Full-Time			Part-Time		
Fall 2020 First-Time Undergraduates	Retained in Fall 2021	Retention Rate	Fall 2020 First-Time Undergraduates	Retained in Fall 2021	Retention Rate
1,129	988	87.5%	61	43	70.5%

E. Faculty Characteristics

A total of 444 full-time faculty (including tenured/tenure-track faculty and non-tenured University Lecturers) taught classes in Fall 2021.

II.E.1 Full-Time Faculty by Race/Ethnicity, Gender, and Tenure Status

Table II.E.1
FULL-TIME FACULTY BY RACE/ETHNICITY, SEX, TENURE STATUS & ACADEMIC RANK: FALL 2021

	American Indian		Asian		Black		Hispanic		Pacific Islanders		Interna-tional		Race Unknown		2 or More Races		White		Total		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	All
TENURED																					
Professors	0	0	32	5	4	3	2	0	0	0	1	0	12	0	0	0	66	9	117	17	134
Associate Professors	0	0	23	9	2	1	2	1	0	0	1	3	2	0	0	0	38	11	68	25	93
Assistant Professors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	55	14	6	4	4	1	0	0	2	3	14	0	0	0	104	20	185	42	227
WITHOUT TENURE																					
Professors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		1	0	1
Associate Professors	0	0	6	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	8	1	9
Assistant Professors	0	0	12	6	0	0	1	0	0	0	21	10	0	0	0	0	24	13	58	29	87
All Others	0	0	14	5	2		11	1	0	0	7	2	1	0	0	2	53	32	88	42	130
Total	0	0	32	11	2	0	12	1	0	0	29	12	1	0	0	2	79	46	155	72	227
WITHOUT FACULTY STATUS																					
Total	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	6	5	6	8	14
TOTAL																					
Professors	0	0	32	5	4	3	2	0	0	0	1	0	12	0	0	0	67	9	118	17	135
Associate Professors	0	0	29	9	2	1	2	1	0	0	2	3	2	0	0	0	39	12	76	26	102
Assistant Professors	0	0	12	6	0	0	1	0	0	0	21	10	0	0	0	0	24	13	58	29	87
All Others	0	0	14	7	2	0	11	1	0	0	7	2	1	1	0	2	59	37	88	44	132
Total	0	0	87	27	8	4	16	2	0	0	31	15	15	1	0	2	189	71	346	122	468

II.E.2 Percentage of Course Sections Taught by Full-Time Faculty

Table II.E.2
PERCENTAGE OF COURSE SECTIONS TAUGHT BY FULL-TIME FACULTY FALL 2021

	Total	Taught by Full-Time Faculty		Taught by Part-Time Faculty		Taught by Others*	
		Number	Percent	Number	Percent	Number	Percent
**Total Number of Course Sections	1914	1026	53.6%	698	36.5%	190	9.9%

* *Others include Full-time Administrators and Teaching Assistants.*
** *Excludes Service Learning, Co-ops, Labs, Seminars, etc.*

II.E.3 Ratio of Full- to Part-time Faculty

Table II.E.3
RATIO OF FULL-TIME TO PART-TIME FACULTY, FALL 2021

	Number	Percent
Total number of Full-time Faculty	468	56.9%
Total number of Part-time Faculty	354	43.1%
Total	822	100.0%

F. Characteristics of the Trustees or Governors

II.F.1 Race/Ethnicity and Sex (simultaneously)

Table II.F.1
RACE/ETHNICITY AND SEX OF BOARD OF TRUSTEES AT
NEW JERSEY INSTITUTE OF TECHNOLOGY, FALL 2022

	Male	Female	Total
White	6	1	7
Black	1	1	2
Hispanic	0	1	1
Asian	1	0	1
American Indian	0	0	0
International	0	0	0
Unknown	0	0	0
Total	8	3	11

II.F.2 List of Trustees/Governors with Titles and Affiliations

Table II.F.2
MEMBERS OF THE BOARD OF TRUSTEES, FALL 2022

Name	Title	Affiliation
Hon. Philip D. (Phil) Murphy, '19 HON ex-officio	Governor	State of New Jersey
Hon. Ras J. Baraka, '18 HON ex-officio	Mayor	City of Newark
Robert C. Cohen '83, '84, '87 (*Chair*)	President, Digital Robotics and Enabling Technologies	Stryker Orthopaedics
Norma J. Clayton '81 (*Co-Vice Chair*)	VP of Learning, Training & Development (Retired)	The Boeing Company
Nicholas M. DeNichilo '73, '78 (*Co-Vice Chair*)	President & Chief Executive Officer	Mott MacDonald
Diane Montalto '82 (*Co-Vice Chair*)	President	DSA Engineering, LLC

Dhiraj Shah '00H (*Co-Vice Chair*)	Founder and Chief Executive Officer	AVAAP
Demetrios (Jim) Stamatis '85 (*Co-Vice Chair*)	CEO	Louis Berger (A WSP Company)
Dr. Jason R. Baynes	Founding Member/Manager	Baynes Orthopaedics
Elisa Charters '92, '93	President	Latina Surge National
Gary C. Dahms PE, PP, CME	President and CEO	T&M Associates
Richard M. "Rich" Maser '73	Executive Chairman	Maser Consulting P.A.
Dennis M. Toft, Esq.	Environmental, Regulatory Attorney	Chiesa Shahinian & Giantomasi PC

II.F.3 URLs of Webpages with Information on Trustees/Governors

Table II.F.3
URL OF WEBPAGE WITH INFORMATION ON TRUSTEES

URL
https://www.njit.edu/boards/board-trustees-membership/

G. Profile of the Institution

II.G.1 Degree and Certificate Programs

In fall 2021, NJIT students were enrolled in 20 Ph.D. programs, master's programs in 47 specialties, 25 Post Baccalaureate Certificate programs and 53 active baccalaureate degree programs.

College of Architecture and Design

- BA, Digital Design
- BA, Interior Design
- BAR, Architecture
- BS, Architecture
- BS, Industrial Design
- MAR, Architecture
- MS, Architecture
- MS, Urban Design
- PhD, Urban Systems

College of Science and Liberal Arts

- BA, Biology
- BA, Communication
- BA, History
- BA, Law, Technology & Culture
- BA, Theatre Arts & Technology
- BGS, General Studies
- BS, Applied Physics
- BS, Biochemistry
- BS, Biology
- BS, Biophysics
- BS, Chemistry
- BS, Communication
- BS, Cyberpsychology
- BS, Data Science Statistics Option
- BS, Environmental Science
- BS, Forensic Science
- BS, Mathematical Sciences
- BS, Science, Technology & Society

- BS, Undecided-Sci & Liberal Arts
- CRT, Cell and Gene Therapy Science
- CRT, Social Media Essentials
- CRT, Statistics for Data Science
- CRT, Technical Communication Essentials
- MS, Applied Mathematics
- MS, Applied Physics
- MS, Applied Science
- MS, Applied Statistics
- MS, Biology
- MS, Biostatistics
- MS, Chemistry
- MS, Data Science Statistics Track
- MS, Environmental Science
- MS, Materials Science & Engineering
- MS, Pharmaceutical Chemistry
- MS, Professional & Technical Communication
- PHD, Applied Physics
- PHD, Biology
- PHD, Chemistry
- PHD, Environmental Science
- PHD, Materials Science & Engineering
- PHD, Mathematical Sciences

Martin Tuchman School of Management

- BS, Business
- BS, Financial Technology
- CRT, Business Analytics
- CRT, Management Essentials
- CRT, Management of Technology
- CRT, Mini-MBA
- MBA, Business Administration
- MS, Management
- PHD, Business Data Science

Newark College of Engineering

- BS, Biomedical Engineering
- BS, Chemical Engineering
- BS, Civil Engineering
- BS, Computer Engineering
- BS, Concrete Industry Management
- BS, Electrical Engineering
- BS, General Engineering
- BS, Industrial Engineering
- BS, Mechanical Engineering
- BS, Engineering Technology - Computer Technology
- BS, Engineering Technology - Construction Engineering Technology
- BS, Engineering Technology - Construction Management Technology
- BS, Engineering Technology - Electrical & Computer Engineering Technology
- BS, Engineering Technology - Manufacturing Engineering Technology
- BS, Engineering Technology - Mechanical Engineering Technology
- BS, Engineering Technology - Medical Informatics Technology
- BS, Engineering Technology - Surveying Engineering Technology
- BS, Engineering Technology - Technology Education
- CRT, Construction Management
- CRT, Intelligent Transportation Systems
- CRT, Pharmaceutical Management
- CRT, Power Systems Engineering
- CRT, Project Management
- CRT, Supply Chain Engineering
- MS, Biomedical Engineering
- MS, Chemical Engineering
- MS, Civil Engineering
- MS, Computer Engineering
- MS, Critical Infrastructure
- MS, Electrical Engineering
- MS, Engineering Management
- MS, Environmental Engineering
- MS, Healthcare Systems Management
- MS, Industrial Engineering
- MS, Internet Engineering
- MS, Manufacturing Systems Engineering

- MS, Materials Science & Engineering
- MS, Mechanical Engineering
- MS, Occupational Safety & Health Engineering
- MS, Pharmaceutical Engineering
- MS, Pharmaceutical Systems Management
- MS, Power and Energy Systems
- MS, Telecommunications
- MS, Transportation
- PHD, Biomedical Engineering
- PHD, Chemical Engineering
- PHD, Civil Engineering
- PHD, Computer Engineering
- PHD, Electrical Engineering
- PHD, Environmental Engineering
- PHD, Industrial Engineering
- PHD, Materials Science & Engineering
- PHD, Mechanical Engineering
- PHD, Transportation

Ying Wu College of Computing

- BA, Computer Science
- BA, Information Systems
- BS, Business & Information Systems
- BS, Computer Science
- BS, Computing & Business
- BS, Data Science Computing Option
- BS, Human Computer Interaction
- BS, Information Technology
- BS, Web & Information Systems
- CRT, Big Data Essentials
- CRT, Business & Information Systems Implementation
- CRT, Computer Science
- CRT, Data Mining
- CRT, Data Visualization
- CRT, Foundations of Cybersecurity
- CRT, Information Security
- CRT, IT Administration

- CRT, Network Security & Information Assurance
- CRT, Software Engineering Analysis & Design
- CRT, Web Systems Development
- MS, Bioinformatics
- MS, Business & Information Systems
- MS, Computer Science
- MS, Computing & Business
- MS, Cyber Security and Privacy
- MS, Data Science
- MS, Data Science Computing Track
- MS, Information Systems
- MS, IT Administration & Security
- MS, Software Engineering
- PHD, Computer Science
- PHD, Information Systems

Accelerated Programs

- B.Arch./MBA
- B.Arch./MUD
- B.Arch./MS
- BA/BS/MPH with Rutgers School of Public Health (Master's in Public Health)
- BA/DMD with Rutgers School of Dental Medicine
- BA/DPT with Rutgers NJ Medical School (Physical Therapy)
- BA/MD with American University of Antigua, West Indies
- BA/MD with Rutgers NJ Medical School
- BA/MD/MBA with American University of Antigua, West Indies
- BA/OD with State University of New York (SUNY) College of Optometry
- BS/JD with Pace University Law School
- BS/JD with Seton Hall University School of Law
- BS/MBA
- BS/MD
- BS/MUD
- BS/MS
- BS/OD

II.G.2 Agreements and Articulations with Other Schools and Institutions

<u>Agreements with Secondary Schools</u>

Academy for Math, Science & Engineering (Morris County Vocational School District)
>> Pre-College Options Program

Bergen County Technical School, Bergen County Academies
>> Joint Advancement Standing Admissions Program
>> Pre-College Options Program

Colonia High School - Woodbridge Township School District
>> Pre-College Options Program

Cranford Public School District
>> Pre-College Options Program

Delaware Valley Regional High School
>> Pre-College Options Program

East Orange STEM Academy
>> Pre-College Options Program

East Side High School, Newark Public Schools District
>> Pre-College Options Program

Essex County Schools of Technology
>> Pre-College Options Program

Freehold Regional High School District
>> Pre-College Options Program

Glen Ridge High School
>> Pre-College Options Program

Hanover Park Regional High School District
>> Pre-College Options Program

Hazlet Township Public School District
>> Pre-College Options Program

High Point Regional High School
>> Pre-College Options Program

Hillside Public School District
>> Pre-College Options Program

Hoboken High School
>> Pre-College Options Program

Hudson County Schools of Technology
>> Pre-College Options Program

John E. Dwyer Technology Academy, Elizabeth Public Schools
>> Pre-College Options Program

Livingston Public Schools
>> Pre-College Options Program

Mahwah Township Public Schools

Pre-College Options Program

Manasquan High School

Pre-College Options Program

Marion P. Thomas Charter School

Pre-College Options Program

Middlesex County Vocational Technical School

Pre-College Options Program

Northern Highlands Regional High School

Pre-College Options Program

Northern Valley Regional High School District, Demarest & Old Tappan

Pre-College Options Program

Ocean County Vocational Technical School

Pre-College Options Program

Ocean Township High School

Pre-College Options Program

Parsippany-Troy Hills Township School District

Joint Advancement Standing Admissions Program, Pre-College Options Program

Paterson Charter School for Science and Technology

Pre-College Options Program

People's Preparatory Charter School

Pre-College Options Program

Pequannock Township Public Schools

Pre-College Options Program

Perth Amboy Public Schools

Pre-College Options Program

Philip's Academy Charter School

Pre-College Options Program

Pioneer Academy (Wayne)

Pre-College Options Program

Rising Star Academy

Pre-College Options Program

Roselle Public Schools

Pre-College Options Program

Saddle Brook School District

Pre-College Options Program

Secaucus High School

Pre-College Options Program

South Brunswick High School

Pre-College Options Program

Sparta High School

Pre-College Options Program

Staten Island Technical School

Qualified Staten Island Tech students will be admitted to the Albert Dorman Honors College

STEM Innovation Academy of the Oranges
Pre-College Options Program

Sussex County Technical School
Pre-College Options Program

Thomas Edison EnergySmart Charter School
Pre-College Options Program

Union County Vocational-Technical School District
UCVTS AIT and MHS students guaranteed admission into a parallel BS program at NJIT

Warren County Technical High School
Pre-College Options Program

Wayne Township Public Schools
Pre-College Options Program

West Orange Public Schools
Pre-College Options Program

Articulation Agreements with In-State, Two-Year Colleges

Bergen Community College
Applied Math, Biology, Biomedical Engineering, Business, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Industrial Engineering, Information Technology, Mechanical Engineering

Brookdale Community College
Business, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Computer Technology, Electrical Engineering, Electrical Technology, Engineering Science, Industrial Engineering, Mechanical Engineering

Burlington County College
Business, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Electrical Engineering Technology, Industrial Engineering, Mechanical Engineering

Camden County College
Business

County College of Morris
Business, Electrical Technology

Essex County College
Biology, Business, Chemistry, Chemical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, History, Industrial Engineering, Information Technology, Mechanical Engineering

Hudson County Community College

Business, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Electrical Technology, Industrial Engineering, Information Systems

Mercer County Community College

Business, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Computer Technology, Industrial Engineering, Mechanical Engineering, Surveying Technology

Middlesex County College

Business, Chemical Engineering, Civil Engineering, Computer Engineering, Computer Science, Electrical Engineering, Electrical Technology, Industrial Engineering, Manufacturing Engineering Technology, Mechanical Engineering

Ocean County College

Business, Civil Engineering, Computer Engineering, Electrical Technology, Mechanical Engineering, Surveying Technology

Passaic County Community College

Business, Engineering Technology

Raritan Valley Community College

Applied Mathematics, Biology, Business, Chemistry, Computer Science, Electrical Technology, Management

Sussex County Community College

Business

Union County College

Business, Chemical Engineering, Civil Engineering, Construction Engineering Technology, Computer Engineering, Computer Technology, Electrical Engineering, Electrical Technology, Industrial Engineering, Mechanical Engineering, Mechanical Technology, Surveying Technology

Warrant County Community College

Business

Agreements with Out-of-State, Two-Year Colleges

None

Agreements with U.S. Four-Year Colleges and Universities (Undergraduate)

New York Institute of Technology College of Osteopathic Medicine

7 year BA/DO program with NYIT COM and NJIT

Ponce Health Sciences University

7 year BA/MD program with PHSU and NJIT

William Paterson University

Students complete coursework in the Pre-Engineering program at WPU, then transfer to NJIT to pursue a degree in one of the engineering disciplines

State University of New York School of Optometry (SUNY)

7 year BA/OD program with SUNY and NJI

Stockton University

3+2 Liberal Arts/Engineering Dual Degree Program

Thomas Edison State University

ASAST students will pursue BS in Engineering Technology degree program at NJIT

Rutgers New Jersey Medical School (NJMS)

7 year BA/MD program with NJMS and NJIT

Rutgers School of Dental Medicine (RSDM)

7 year BA/DMD program with RSDM and NJIT

Rutgers School of Health Professions

7 year BA/PA program, 7 year BA/DPT program, 7 or 8 year BA/MLS program, and 7 or 8 year BA/MPH program

Agreements with International Institutions

UNDERGRADUATE		
Korea	Hanyang University	Exchange
Netherlands	University of Twente	Exchange
Turkey	Istanbul Technical University	Dual Degree

UNDERGRADUATE & GRADUATE		
Antigua	American University of Antigua	Accelerated Articulation Agreement
Austria	University of Innsbruck	Exchange
China	Beijing University of Technology	Joint Degree (Supplement)
China	Fujian University of Technology	Exchange; BS Degree Articulation Agreement
China	Qingdao University of Technology	Exchange; Articulation Agreement
China	Wuchang University of Technology	Exchange

China	Shanghai Lixin University of Accounting and Finance	Joint Degree (Supplement)
China	Shanghai Lixin University of Accounting and Finance	Articulation Agreement
Egypt	Ain Shams University of Cairo & Ocean County College	Exchange
France	ESDES School of Management	Exchange; Articulation Agreement
Germany	Furtwangen University of Applied Sciences	Exchange
Germany	The Hochschule Bremen - City University of Applied Sciences	Exchange
Grenada	St. Georges University School of Medicine	Accelerated Articulation Agreement
India	Indian Institute of Technology Gandhinagar	Exchange & exploration of joint degree programs
Italy	Universita degli Studi di Parma	Joint Degrees
Italy	University of Siena	Exchange
Jordan	Yarmouk University	Exchange
Korea	Pukyong National University	Exchange
Spain	Universidad Pontificia Comillas	Exchange
Spain	Universidad Nebrija	Exchange
Sweden	Linköping University	Exchange
Sweden	Jonköping University (School of Engineering and International Business School)	Exchange
Taiwan	National Chiao Tung University	Exchange
Taiwan	National Chung Cheng University	Exchange

GRADUATE		
Korea	Hanyang University	Exchange
Netherlands	University of Twente	Exchange
Turkey	Istanbul Technical University	Dual Degree
China	Beijing University of Posts & Telecommunications	Articulation Agreement

China	Taizhou University	Cooperation Agreement
China	Soochow University	
Germany	Universitate Passau	Joint Degree
India	Siksha O Anusandhan University	Joint Degree
Italy	University of Parma (Universita di Parma)	Joint Degrees
Italy	University of Salerno (Universita degli Studi di Salerno)	Joint PhD Program
Italy	Politecnico di Bari	Joint/Dual Degrees
Italy	University of Parma (Universita di Parma)	Joint PhD Program

H. Major Research and Public Service Activities

II.H.1 R&D Expenditures

R&D Expenditures: Fiscal Year 2021	
Federally Financed Academic R&D Expenditures	$105,635,000
Institutionally Financed Academic R&D Expenditures	$60,952,000
Total Academic R&D Expenditures	$166,587,000

II.H.2 Research Institutes, Centers and Laboratories

NJIT is proud of its reaffirmed status as an "R1" Very High Research Activity doctoral institution according to the Carnegie Classification of Institutions of Higher Education. NJIT is one of only three R1 institutions in the state of New Jersey and 146 institutions across the country. The R1 classification is the result of NJIT's growth in research in five transdisciplinary areas: Bioscience and Bioengineering, Data Science and Management, Environment and Sustainability, Material Science and Engineering, and Robotics and Machine Intelligence.

BIOSCIENCE AND BIOENGINEERING

This research cluster includes multidisciplinary research in the areas of biomedical devices, sensors and instrumentation, brain health & neuroscience, tissue engineering, biological sciences & behavior, molecular biology, evolutionary sciences, and gene therapy and phenotype related research.

INSTITUTES

Institute for Brain and Neuroscience Research
Dr. Namas Chandra and Dr. Farzan Nadim, Co-Directors

The goal of the Institute for Brain and Neuroscience Research (IBNR) is to promote research and training in neuroscience and neural engineering and to provide an overall contact point for neuroscience initiatives at NJIT.

CENTERS

## BioSensor Materials for Advanced Research & Technology (BioSMART Center)
Dr. Omowunmi "Wunmi" Sadik, Director

BioSensor Materials for Advanced Research & Technology (BioSMART Center) is an interdisciplinary research laboratory that seeks to understand the mechanisms of how chemical information is transformed from one interface to another, and to use that knowledge to develop innovative sensing technologies, functional materials, and environmental devices.

Center for Brain Imaging
Dr. Bharat Biswal, Director

> The long-term goal of the Center for Brain Imaging is to better understand human brain function using integrative neuroimaging and statistical and computational modeling methods.
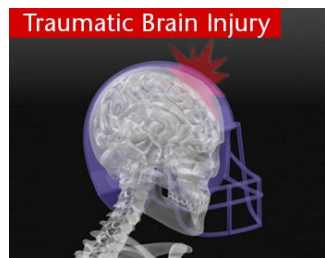
Center for Injury Biomechanics, Materials and Medicine
Dr. Namas Chandra, Director

The goal of the Center for Injury Biomechanics, Materials and Medicine (CIBM3) is to help soldiers and citizens by understanding how blasts and blunt forces cause concussions and traumatic brain injuries.

LABORATORIES

- Advanced Biomaterials Translation Laboratory
- BioDynamics Laboratory
- Cardiovascular Tissue Engineering and Stem Cell Laboratory
- Computational Neuroanatomy and Neuroinformatics Lab
- Computational Orthopedics and Rehabilitation Lab
- Coppélia Research Laboratory
- Ecohydrology Lab
- Fluid Locomotion Laboratory
- Global Change and Urban Ecology Lab
- Laboratory for Neurobiology and Behavior
- Laboratory of Neuroethology of Locomotion
- Neural Engineering for Speech and Hearing Laboratory
- Neural Prosthetics Laboratory
- Neuroecology of Unusual Animals Laboratory
- Sensorimotor Quantification and Rehabilitation Laboratory
- STG Lab

- Structural Ecology Lab
- Swarm Lab
- The Horax BioDatanamics Lab
- The Keck Laboratory for Topological Materials
- Vision and Neural Engineering Laboratory
- Zebrafish Neural Circuits and Behavior Laboratory

DATA SCIENCE AND MANAGEMENT

This research cluster includes the study and practice of data science and analytics, and extracting information and knowledge from data that can be used for medical, financial, business management scientific and engineering applications.

INSTITUTES

Henry J. and Erna D. Leir Research Institute for Business, Technology and Society
Dr. Yi Chen, Director

> The Henry J. and Erna D. Leir Research Institute for Business, Technology, and Society (LRI) creates value by integrating research and education to support economic and policy impacts that foster sustainable economic development, addressing critical global challenges to corporate and business continuity and growth

Institute for Data Science
Dr. David Bader, Director

> The Institute for Data Science initiates collaborative inter-disciplinary research by bringing existing research centers in big data, medical informatics and cybersecurity together with new research centers in data analytics and artificial intelligence, cutting across all NJIT colleges and schools to conduct both basic and applied research.

The Institute for Future Technologies
Dr. Chaim Hames, Rector

> The Institute for Future Technologies combines the academic and research capacities of two global institutions, New Jersey Institute of Technology (NJIT) and Ben-Gurion University of the Negev (BGU), forming the region's next hub of technological innovation.

New Jersey Innovation Institute (NJII)
Dr. Teik Lim, Interim CEO

New Jersey Innovation Institute (NJII) was founded in 2014 and combines the vast resources of NJIT, strong industry and government relationships, and proven methods to drive innovation and deliver transformative products and services.

CENTERS

Center for AI Research
Dr. Guiling Wang, Director

The Center for AI Research aims to provide an intellectual environment and primary home for AI research initiatives at NJIT. It aims to promote cutting-edge and high-quality research activities and to cultivate faculty and student publications and patents in AI and machine learning.

Center for Applied Mathematics and Statistics
Dr. Lou Kondic, Director

The Center for Applied Mathematics and Statistics (CAMS) is an interdisciplinary research center dedicated to supporting applied research in the mathematical sciences at NJIT.

Center for Big Data
Dr. Chase Wu and Dr. Yi Chen, Co-Directors

The mission of the Center for Big Data (CBD) at NJIT is to synergize the strong expertise in various disciplines across the NJIT campus and build a unified platform that embodies a rich set of big data enabling technologies and services with optimized performance to facilitate research collaboration and scientific discovery.

Center for Computational Heliophysics
Dr. Alexander Kosovichev, Director

The primary goal of the NJIT Center for Computational Heliophysics (CCH) is to develop data analysis and modeling tools in the area of heliophysics by combining expertise of the College of Computing Sciences (Computer Science Department) and College of Science and Liberal Arts (Departments of Physics and Mathematical Sciences), and establishing partnership with the NASA Advanced Supercomputing (NAS) Division at the NASA Ames Research Center.

Cybersecurity Research Center
Dr. Kurt Rohloff and Dr. Reza Curtmola, Co-Directors

The Cybersecurity Research Center seeks to address ongoing and long-term future cybersecurity needs for protection and further economic development across the State of

New Jersey, nationally, and internationally by developing new methods for understanding how modern cyber systems can be compromised and fail, how to design cyber systems so they are secure, and how to improve or fix the cyber infrastructure that has already been deployed.

Leir Center for Financial Bubble Research

Dr. William Rapp, Director

The Leir Center for Financial Bubble Research seeks to understand through quantitative and qualitative research how a financial bubble can be identified, including its stages of development, and what policies can best manage its impacts.

New Jersey Innovation Acceleration Center

Dr. Michael Ehrlich, Director

The New Jersey Innovation Acceleration Center (NJIAC) is a resource for entrepreneurs and innovators from throughout the region. With our partnership with VentureLink (formerly NJIT EDC) we offer a full range of services including business incubation to new businesses training and other resources.

NSF iCorps Program Center

Dr. Michael Ehrlich, Director

The I-Corps Sites Program offers specialized training and mini-grants to teams with interest in exploring the commercial viability of their ideas for products and businesses that are based on their own inventions, University intellectual property, or any STEM-related technology. Grantees will embark on commercialization of new technologies, products and processes that arise from the institution. Develop formal, active, local innovation ecosystems that contribute to a large, national network of mentors, researchers, entrepreneurs and investors and encourages collaboration between academia and industry.

Paul Profeta Real Estate Technology, Design and Innovation Center (RETDIC)

Dr. Zhipeng Yan, Director

The Paul Profeta Real Estate Technology, Design and Innovation Center serves as the locus of research, teaching and training related to disruptive technologies innovations and novel design, service, management techniques that are actively transforming the real estate field.

Structural Analysis of Biomedical Ontologies Center

Dr. Yehoshua Perl and Dr. James Geller, Co-Directors

The Structural Analysis of Biomedical Ontologies Center, located in Department of Computer Science at the New Jersey Institute of Technology (NJIT), is devoted to research exploring structural issues in biomedical ontologies (e.g., SNOMED CT, NCIt, NDF-RT, and ChEBI).

The Elisha Yegal Bar-Ness Center for Wireless Information Processing
Dr. Alexander Haimovich, Director

The Elisha Yegal Bar-Ness Center for Wireless Information Processing (CWiP) researches diverse areas of communications, signal processing, and radar including cloud radio-access networks, cooperative networks, distributed radar, and acoustics communications.

VentureLink
Dr. Teik Lim, Interim Executive Director

VentureLink is a community hub for technology companies at all stages of development, providing companies with weekly programming, workspace, and expert mentorship.

LABORATORIES

- Advanced Communication And Signal Processing (aCASP) Research Lab
- Advanced Networking Laboratory
- Big Data Analytics Lab
- Design Computation Lab
- FinTech Lab
- Geriatric Engineering Technology Lab
- Gidget Lab - (G)ender - (I)nclusive (D)esign, (G)ame, and (E)ducational (T)echnology Lab
- High Performance Computing Laboratory
- Laboratory for Discrete Event Systems
- Laboratory for High Performance DSP & Data Engineering Research (HPDER)
- Media Interface and Network Design Lab
- Networked Controls and Intelligent Diagnostics (NCID) Laboratory
- Networking Research Laboratory
- Operations Management Laboratory
- Optimized Networking Laboratory
- Social Interaction Laboratory
- Systems Optimization and Analytics Lab
- The GIScience & Remote Sensing Lab

ENVIRONMENT AND SUSTAINABILITY

This cluster represents interdisciplinary research areas in urban ecology, space weather, solar terrestrial, environmental sensors, sustainable infrastructure, intelligent transportation systems,

global climate change, biodiversity and conservation, clean water, waste management, renewable energy, and smart grid systems.

INSTITUTES

Institute for Space Weather Sciences

Dr. Haimin Wang, Director

> The Institute for Space Weather Sciences (ISWS) combines the strengths of three NJIT research centers: Center for Solar-Terrestrial Research, Center for Computational Heliophysics, and Center for Big Data to understand and predict physics of solar activities and their space weather effects. It integrates state-of-the-art observations, modeling, and big data analytics.

CENTERS

Center for Community Systems

Dr. Colette Santasieri, Director

> The mission of the Center for Community Systems is to be a resource and conduit for creating thriving, sustainable, and resilient communities. It is a strategic platform that connects innovative planners, engineers, environmental scientists, social scientists, architects, and economists with government, industry, and community organizations to solve complex problems.

Center for Energy Efficiency, Resilience and Innovation (CEERI)

Dr. Haim Grebel, Director

> The Center for Energy Efficiency, Resilience and Innovation (CEERI) conducts research and development, provides technical and educational assistance for the deployment of sustainable technologies and applications to manage energy and water resources, and promotes public awareness of energy resources.

Center for Ethics and Responsible Research

Dr. Britt Holbrook, Director

> Focusing on cutting-edge transdisciplinary research in ethics and ethics education, CER2 aims to develop a recognizable NJIT brand of ethical and responsible research.

Center for Solar-Terrestrial Research
Dr. Andrew Gerrard, Director

The Center for Solar-Terrestrial Research (CSTR) at NJIT is an international leader in ground- and space-based solar and terrestrial physics, with interest in understanding the effects of the Sun on the geospace environment. CSTR operates the Big Bear Solar Observatory (BBSO) and Owens Valley Solar Array (OVSA) in CA, the Jeffer Observatory at Jenny Jump State Forrest in NJ, and the Automated Geophysical Observatories (AGOs) distributed across the Antarctic iceshelf.

Polar Engineering Development Center (PEDC)
Dr. Andrew Gerrard, Director

The Polar Engineering Development Center (PEDC), housed within NJIT's Center for Solar-Terrestrial Research (CSTR), focuses on instrument and hardware design for deployment at high latitudes and Polar regions.

LABORATORIES

- Advanced Energy Systems and Microdevices Laboratory
- Atmospheric Chemistry Laboratory
- Building Dynamics Lab
- Building Energy and Built Environment (BE2) Lab
- Digital Spatial History Lab
- Energy and Environmental Nanotechnology Laboratory
- Environmental Systems Lab
- Geo-Resources and Geotechnical Laboratory
- Laboratory of Applied Biogeochemistry for Environmental Sustainability
- Urban Ecology Lab

MATERIAL SCIENCE AND ENGINEERING

This cluster represents transdisciplinary research areas in advanced materials including smart energetic and campsite materials, quantum materials, and biomaterials, polymers and membrane technologies, nanotechnologies, and additive/advanced manufacturing systems.

<u>CENTERS</u>

Center for Building Knowledge
Deane Evans, Director

The Center for Building Knowledge (CBK) is dedicated to generating new knowledge to improve the built environment and enhance the planning, design, construction and operation of facilities, helping individuals and communities make better-informed decisions about the performance, sustainability, and resilience of buildings nationwide.

Center for Membrane Technologies
Dr. Kamalesh K. Sirkar, Director

The Center for Membrane Technologies investigates problems across multiple sectors that use membrane technologies to separate and purify water, air, industrial-fluid streams, solvents, pharmaceuticals, proteins, biopharmaceuticals, cells, particles, and nanoparticles.

Center for Natural Resources
Dr. Michel Boufadel, Director

The Center for Natural Resources at the New Jersey Institute of Technology, was founded in 2012 to foster sensible approaches for environmental and energy resource utilization.

Center for Resilient Design
Deane Evans, Director

The Center for Resilient Design was established in the aftermath of Super Storm Sandy and has become a research, technical assistance, and training institution focused on improving the resilience of buildings and communities in the face of natural disasters and other stresses to inform and support disaster-resilience initiatives in other jurisdictions across the US and beyond.

Center for Structured Organic Particulate Systems (C-SOPS)
Dr. Rajesh Davé, Director

The Center for Structured Organic Particular Systems (C-SOPS) brings together a cross-disciplinary team of researchers from major universities to work closely with industry leaders and regulatory authorities to improve the way pharmaceuticals, foods and agriculture products are manufactured.

Center of Materials for Advanced Energetics
Dr. Edward L. Dreyzin, Director

In this center, new metal-based reactive materials are developed, characterized and tested. Correlations between material synthesis processes and the powder characteristics are established and their reaction mechanisms are elucidated. The center includes laboratories for mechanochemistry and metal combustion and a state-of-the-art thermo-analytical facility. The center also conducts research in materials characterization facilities in York Center.

CNBM New Energy Materials Research Center

Dr. Ken Chin, Director

CNBM New Energy Materials Research Center, a public US corporation and sole owner of the world's only independently formed tellurium mine in China, recently awarded NJIT a three-year, $1.5 million grant to establish a CdTe solar energy research center.

Electronic Imaging Center

Dr. Haim Grebel, Director

The Electronic Imaging Center is an interdisciplinary center focused on nanotechnology, spectral analysis with sub-wavelength structures, and energy.

Membrane Science, Engineering and Technology (MAST) Center

Dr. Kamalesh K. Sirkar, Director

The Membrane Science, Engineering and Technology Center, a National Science Foundation Industry/University Cooperative Research Center (I/UCRC), conducts basic research and related development on innovative materials and processes that facilitate the use of membrane technology.
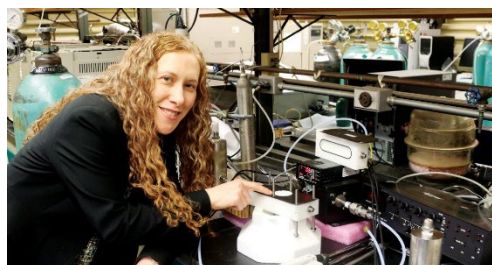
Microfabrication Innovation Center

Dr. Sagnik Basuray, Director

The NJIT Microfabrication Innovation Center provides cutting-edge micro/nano-fabrication and characterization facilities for research in fields ranging from bio-sensing, drug delivery to microfluidics and MEMS fabrication.

New Jersey Center for Engineered Particulates (NJCEP)

Dr. Rajesh Davé, Director

NJCEP performs a unique blend of fundamental and applied research to develop predictable, environmentally conscious manufacturing processes and profitable applications for value-added powder materials having tailored surface or bulk properties.

Otto H. York Center for Environmental Engineering and Science (YCEES)
Dr. Som Mitra, Executive Director

The Otto H. York Center for Environmental Engineering and Science (YCEES) at New Jersey Institute of Technology (NJIT) offers core laboratory facilities as a resource for the university and for contract research.

LABORATORIES

- Additive Manufacturing Lab
- Applied Electrohydrodynamics Laboratory
- Biophotonics and Bioimaging Laboratory
- Biophotonics Sensing and Imaging Laboratory
- Computational Biophysics Laboratory
- Computational Laboratory for Porous Materials
- Computational Nanomechanics and Materials Science Laboratory
- Computer Assisted Tissue Engineering and Blood System Biology Laboratory
- Heat and Fluid Transport Engineering Research Laboratory
- High Performance Concrete and Structures Laboratory
- Instructive Biomaterials & Additive Manufacturing Laboratory (IBAM-Lab)
- Laboratory for Numerical Turbulence
- Laboratory for the Mechanics of Advanced materials
- Laboratory of Nanomedicine and Healthcare Biomaterials
- Mass Spectrometry Research Laboratory
- Material Analysis in Biological Systems Laboratory
- Material Dynamics Lab
- Materials and Structures Laboratory
- Mixing Laboratory
- Nano-Optoelectronic Materials and Devices Laboratory
- Nanoelectronics and Energy Conversion Laboratory
- Nanomaterials for Energy and Environment Labs (NEEL)
- Opto and Microfluidics Laboratory
- Particle Engineering and Pharmaceutical Nanotechnology Laboratory
- Soft Matter Research Laboratory
- Sustainable Environmental Nanotechnology and Nanointerfaces Laboratory
- Terahertz Spectroscopy, Imaging, and Wireless Communications Lab
- Tissue Innervation and Muscle Mimetics Laboratory

ROBOTICS AND MACHINE INTELLIGENCE

This research cluster includes human machine interface, cyber-human systems, robotics: bioinspired, medical, social and industrial autonomous systems, intelligent infrastructure, artificial intelligence, machine learning, and augmented and virtual reality.

CENTERS

Center for Rehabilitation Robotics
Dr. Sergei Adamovich, Director

NJIT and the Kessler Foundation are collaborators in the Rehabilitation Engineering Research Center (RERC), working on wearable robots for independent mobility and manipulation for individuals who have experienced spinal cord injuries, suffer from muscular dystrophy, or have suffered a stroke.

Intelligent Transportation Systems Resource Center
Dr. Lazar Spasovic, Director

The Intelligent Transportation Systems (ITS) Resource Center at NJIT is established as a premier technical, research and technology resource for the New Jersey Department of Transportation, Transportation Systems Management unit, including Division of Traffic Operations and Division of Mobility and Systems Engineering. The main purpose of the Center is to conduct research studies of innovative ITS technologies and optimize strategies for their deployment in New Jersey's transportation system.

LABORATORIES

- AI for Social Good Lab
- Controls, Automation, and Robotics Laboratory
- Face Recognition & Video Processing Laboratory
- Information Ecosystems Lab (InfEco)
- Intelligent Transportation Systems Laboratory
- Intelligible Information Visualization Lab

- Interactive Cross-Reality Lab
- Mind, Interface, and Network Design Lab
- The Assistive and Intelligent Robotics Lab
- The Lab of Interesting Agents
- Visual Computing, Graphics, and Artificial intelligence (VGA) Lab
- Virtual Technology Applications Lab for Human Simulation (ViTALHS)

I. Major Capital Projects Completed in Fiscal Year 2021-2022
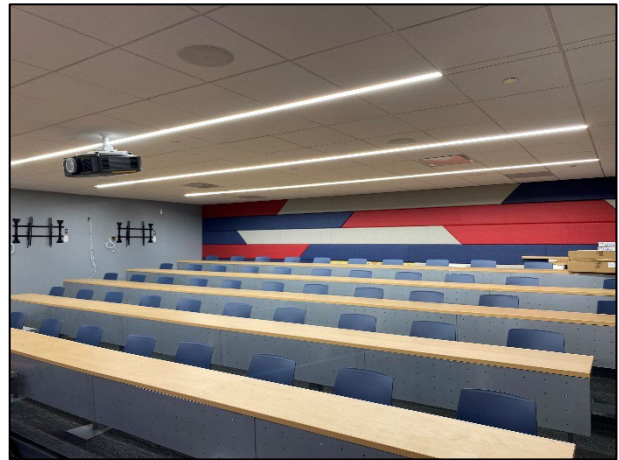
MEC 224 Lecture Hall - $617K

Renovation of the MEC 224 Lecture Hall for Fall 2022. The project included upgraded finishes, new furniture, a new audiovisual system, additional power, and high-capacity wireless connectivity that will provide students with a modern learning environment.
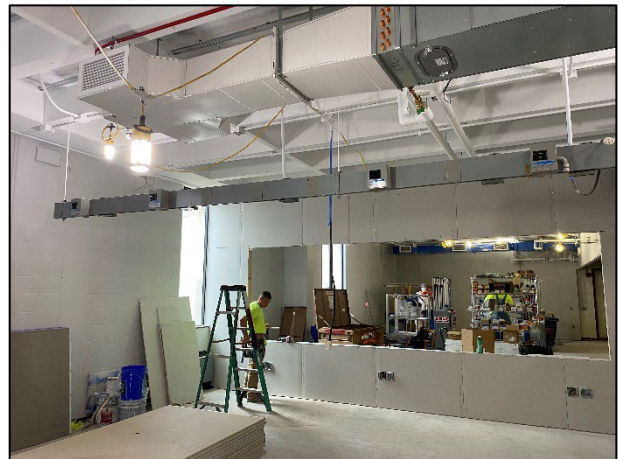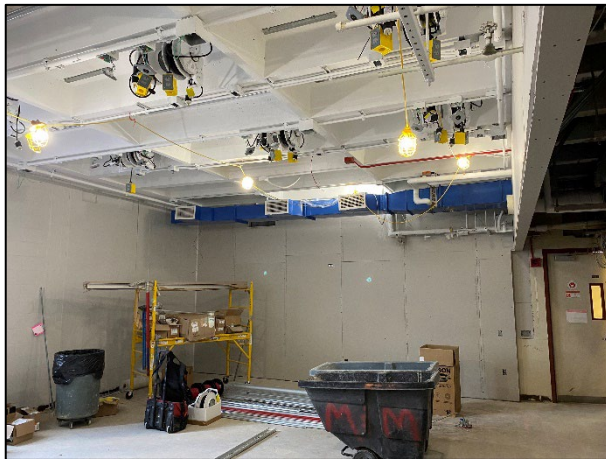
Tiernan Hall Physics Lab Renovation – $2.1M

Flexible and modern laboratory furniture, LED lighting, upgraded HVAC systems, new finishes, upgraded audiovisual equipment, and storage cabinets in the preparation area. The project will also put "science on display" by adding windows to the corridor. Provisions will be made to accommodate a demonstration bench to encourage student collaboration and interaction utilizing the cutting-edge equipment.

**Microfabrication Innovation Center & 105 VentureLink - $7.4M**

Development of Medical Device Innovation Cluster and TTE Center to develop, test, and validate advanced micro- and nano-device fabrication technologies to develop biomarkers-based medical sensors such as Lab-on-a-Chip. This laboratory will support multidisciplinary research within NJIT and will welcome researchers from other academic institutions and industrial organizations. Renovations within 105 VentureLink were needed to create the medical device validation facility for technology assessment with key stakeholders working towards the demonstration of proof-of-value and pre-commercialization for healthcare applications.

Weston Hall Façade Renovation - $1.13M

In Phase I, the façade and building envelope restoration consisted of the removal and replacement of all window caulking, caulking at control joints, repairs to deteriorated masonry units, mortar joint replacement, relieving angle replacement with associated brick replacement,

new expansion joints, waterproof coatings, roof parapet repairs, miscellaneous rood repairs and relieving angle anchoring as needed. Phase I was completed in Fall 2021. Phase II addressed the high-priority areas on the north, east, and south elevations of the building. The proposed façade repairs, roof parapet repairs, and other miscellaneous roof repair work will provide the building with a much-needed building envelope revitalization. Phase III is scheduled for Fiscal Year 24.
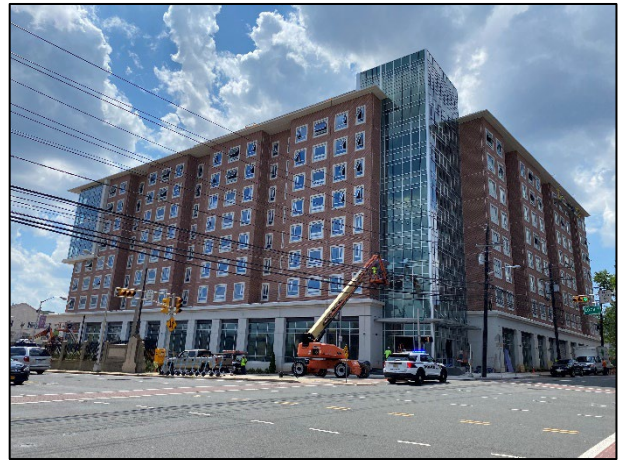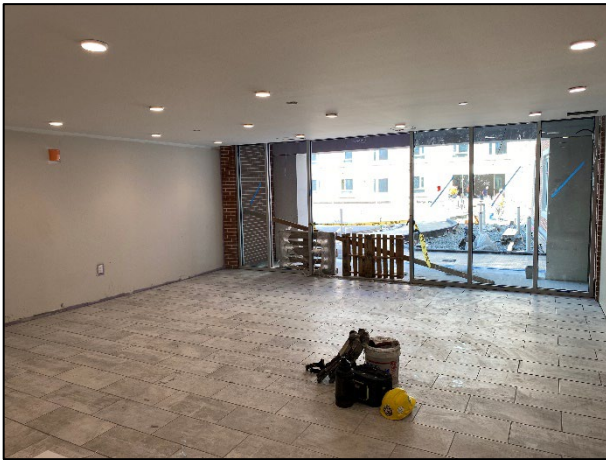
Maple Hall – Coming Fall 2022

NJIT's new apartment-style residence hall. Maple Hall will emphasize single-occupancy bedrooms and will be constructed using environmentally friendly materials. The new residence hall will have 548 beds, 176 units, and 76 parking spaces. The new residence hall will have several amenities: private and group study rooms, a digital gaming room, a creative collaboration studio, an outdoor terrace with a fire pit, an outdoor kitchen and seating areas, a mixed-use retail space, and an on-site parking garage. Maple Hall was constructed through a Public Private Partnership (P3) between NJIT and CHF-Newark, LLC.

SECTION III – OTHER INSTITUTIONAL INFORMATION

The New Jersey Institute of Technology has exceptional faculty who educate top students for rewarding careers. In FY2021-2022, NJIT conferred 2,792 degrees and certificates, listed in Section A. Highlights of faculty efforts, including patents, publications and awards are provided in Section B.

III.A. Degrees Awarded

Bachelors	Degrees Awarded
BA	**134**
Biology	71
Communication	5
Computer Science	1
Digital Design	15
History	3
Information Systems	12
Interior Design	12
Law, Technology, & Culture	9
Theater Arts & Technology	6
BAR	**60**
Architecture	60
BET	**195**
Computer Technology	15
Construction Engineering Technology	41
Construction Management Technology	6
Electrical & Computer Engineering Technology	70
Manufacturing Engineering Technology	1
Mechanical Engineering Technology	52
Medical Informatics Technology	6
Surveying Engineering Technology	4
BGS	**4**
General Studies	4
BS	**1,476**
Applied Physics	10
Architecture	8
Biochemistry	8
Bioinformatics	1
Biology	18
Biomedical Engineering	93
Business	94

Business & Information Systems	33
Chemical Engineering	71
Chemistry	4
Civil Engineering	195
Communication	2
Computer Engineering	45
Computer Science	223
Computing & Business	12
Concrete Industry Management	8
Cyberpsychology	1
Electrical Engineering	91
Environmental Science	9
Financial Technology	1
Forensic Science	8
Human Computer Interaction	5
Industrial Design	9
Industrial Engineering	34
Information Technology	234
Mathematical Sciences	16
Mechanical Engineering	225
Science, Technology & Society	8
Web & Information Systems	10
Grand Total	**1,851**

Masters	Degrees Awarded
MAR	**8**
Architecture	8
MBA	**53**
Business Administration	53
MS	**670**
Applied Mathematics	5
Applied Statistics	6
Architecture	5
Bioinformatics	2
Biology	2
Biomedical Engineering	26
Biostatistics	1
Business & Information Systems	8
Chemical Engineering	8
Chemistry	3
Civil Engineering	94
Computer Engineering	10

Computer Science	131
Computing & Business	2
Critical Infrastructure	1
Cyber Security & Privacy	14
Data Science	16
Data Science Computing Track	64
Data Science Statistic Track	7
Electrical Engineering	25
Engineering Management	58
Environmental Engineering	6
Environmental Science	2
Industrial Engineering	15
Information Systems	31
Infrastructure Planning	1
Internet Engineering	1
IT Administration & Security	22
Management	27
Manufacturing Systems Engineering	4
Materials Science & Engineering	4
Mechanical Engineering	35
Occupational Safety & Health Engineering	2
Pharmaceutical Chemistry	9
Pharmaceutical Engineering	4
Pharmaceutical Systems Management	4
Professional & Technical Communication	5
Software Engineering	4
Telecommunications	1
Transportation	3
Urban Design	2
Grand Total	**725**

Doctoral	Degrees Awarded
Applied Physics	1
Biology	2
Biomedical Engineering	7
Business Data Science	5
Chemical Engineering	8
Chemistry	4
Civil Engineering	2
Computer Engineering	5
Computer Science	14
Electrical Engineering	8

Environmental Engineering	4
Environmental Science	1
Industrial Engineering	3
Information Systems	6
Materials Science & Engineering	6
Mathematical Sciences	10
Mechanical Engineering	5
Transportation	6
Urban Systems	2
Grand Total	**99**

Post Baccalaureate Certificates	Degrees Awarded
Big Data Essentials	4
Biomedical Device Development	1
Business Analytics	2
Business & Information Systems Implementation	3
Cell & Gene Therapy Sciences	1
Computer Science	4
Construction Management	10
Data Mining	13
Data Visualization	1
Financial Technology	2
Foundations of Cybersecurity	2
Finance for Managers	1
IT Administration	5
Management Information Systems	2
Management of Technology	5
Mini-MBA	2
Power Systems Engineering	2
Project Management	14
Social Media Essentials	1
Statistics for Data Science	1
Structural Engineering	2
Supply Chain Engineering	14
Technical Communication Essentials	1
Grand Total	**93**

III.B. Faculty

Faculty of the New Jersey Institute of Technology are productive in developing intellectual property, conducting research, and publishing and presenting scholarly research. Faculty receiving prestigious awards in 2020 and 2021 are listed below.

III.B.1 Faculty Awards

Faculty Awards 2021-2022	
T. Alvarez	American Academy of Optometry Diplomate
J. Ancis	American Psychological Association Fellow
T. Arinzeh	National Academy of Inventors Fellow
D. Bader	IEEE Computer Society Sidney Fernbach Award
M. Bandelt	NSF CAREER Grantee
K. Belfield	Royal Society of Chemistry Fellow
W. Cao	NSF Astronomy and Astrophysics Advisory Committee
Z. Çelik	American Society of Architectural Historians Fellow
S. Chester	Thomas J.R. Hughes Young Investigator Award
S. Daher	Society for Simulation in Healthcare Technology's Innovator of the Year
M. Guvendiren	National Academy of Inventors Fellow
T. Han	NSF CAREER
S. Inoue	NSF CAREER
J. Kliewer	Fulbright Fellow
M. Li	National Academy of Inventors Fellow
E. Michalopoulou	IEEE Oceanic Engineering Society Distinguished Lecturer
G. Wang	IEEE Fellow