

December 2019 Graduate Future Plans Survey College of Engineering Summary Report

This report presents summary results from the December 2019 Graduate Future Plans Survey for departments and types of degree programs in the College of Engineering, followed by summary information on employment and further education for the college as a whole.

Highlights for the College of Engineering

- 60% of the doctoral and master's students in COE graduating in fall 2019 responded to the survey
- 76% of doctoral respondents and 75% of master's respondents in COE report that they have secured full-time employment for the coming year
- COE graduates with full-time employment report an average salary in the coming year of \$103,398 (median = \$107,500)
- 29% of COE graduates with full-time employment will be working in North Carolina (23% in the Research Triangle Area)
- 12% of master's students in COE report that they plan to return to graduate/professional school in the coming year
- 89% of master's students in COE with definite plans to graduate/professional school will be attending a school in North Carolina

Department Summaries

The following tables provide summary statistics for December 2019 graduates in the College of Engineering. Table 1 includes the number of graduate students in the College of Engineering who graduated in December 2019 and the number of those students who submitted the Graduate Future Plans Survey. It also includes the number of students who indicated at the time of the survey that they would be working full-time, as well as the number of those who indicated they were either pursuing or planning to pursue another graduate or professional degree in the coming year. Finally, it includes summary statistics on the self-reported salaries of those who reported that they would be employed full-time. Table 2 and Table 3 provide the same summary statistics for December 2019 graduates in each department in the College of Engineering, for doctoral graduates and master's graduates, respectively.

Table 1: College Summary

College	Survey Population	Survey Respondents	Response Rate	N Full Time Job	N Grad/Prof School*	25th Percentile Salary	Median Salary	75th Percentile Salary	Average Salary	N Reporting Salary
COE Overall	438	264	60%	198	25	82,500	107,500	122,500	103,398	181

Table 2: Department Summaries, Doctoral Degree Recipients

Department	Survey Population	Survey Respondents	Response Rate	N Full Time Job	N Grad/Prof School*	25th Percentile Salary	Median Salary	75th Percentile Salary	Average Salary	N Reporting Salary
Biomedical Engineering	2	1	50%	1	.	**	**	**	**	1
Chemical Engineering	9	5	56%	2	.	**	**	**	**	2
Civil, Construction, and Environmental Engineering	7	6	86%	6	.	52,500	60,000	72,500	66,667	6
Computer Science	11	6	55%	6	.	102,500	112,500	136,250	119,375	4
Electrical and Computer Engineering	23	15	65%	13	.	47,500	62,500	122,500	85,962	13
Fitts Dept of Industrial and Systems Engineering	7	3	43%	3	.	**	**	**	**	3
Materials Science and Engineering	6	2	33%	1	.	**	**	**	**	1
Mechanical and Aerospace Engineering	21	13	62%	6	.	57,500	62,500	102,500	79,500	5
Nuclear Engineering	5	4	80%	4	.	75,000	85,000	112,500	93,750	4
COE Doctoral Degree Recipients Overall	91	55	60%	42	.	57,500	92,500	117,500	87,821	39

*Includes all students planning on going to graduate/professional school in the coming year for another degree, including those who were currently enrolled as of the time of the survey or who have been accepted to graduate/professional school and know where they will be going, as well as those who have been accepted to at least one school but have not yet finalized their plans, those who have applied but have not yet been accepted, and those who have not yet applied but plan to do so.

**Statistics on salary information for those departments with fewer than 4 respondents reporting their salary have been excluded from the table.

Table 3: Department Summaries, Master's Degree Recipients

Department	Survey Population	Survey Respondents	Response Rate	N Full Time Job	N Grad/Prof School*	25th Percentile Salary	Median Salary	75th Percentile Salary	Average Salary	N Reporting Salary
Biomedical Engineering	2	2	100%	.	1	**	**	**	**	.
Chemical Engineering	25	13	52%	5	5	82,500	107,500	107,500	103,000	5
Civil, Construction, and Environmental Engineering	44	23	52%	14	3	67,500	72,500	87,500	81,923	13
College of Engineering Dean's Office	10	5	50%	4	.	**	**	**	**	3
Computer Science	116	77	66%	69	2	112,500	117,500	147,500	122,213	61
Electrical and Computer Engineering	88	51	58%	43	4	82,500	102,500	122,500	104,487	39
Fitts Dept of Industrial and Systems Engineering	15	8	53%	3	2	**	**	**	**	3
Materials Science and Engineering	13	10	77%	7	5	72,500	87,500	132,500	94,643	7
Mechanical and Aerospace Engineering	29	19	66%	11	2	77,500	82,500	107,500	89,318	11
Nuclear Engineering	4	1	25%	.	1	**	**	**	**	.
Operations Research	1	**	**	**	**	.
COE Master's Degree Recipients Overall	347	209	60%	156	25	87,500	112,500	122,500	107,676	142

*Includes all students planning on going to graduate/professional school in the coming year for another degree, including those who were currently enrolled as of the time of the survey or who have been accepted to graduate/professional school and know where they will be going, as well as those who have been accepted to at least one school but have not yet finalized their plans, those who have applied but have not yet been accepted, and those who have not yet applied but plan to do so.

**Statistics on salary information for those departments with fewer than 4 respondents reporting their salary have been excluded from the table.

Full-Time Employment (college overall)

Table 4: Name of Company/Organization, Doctoral Degree Recipients

	N
ANSYS, Inc.	1
Apple	1
Applied Materials	1
BridgeBio Pharma	1
Canon Virginia Inc	1
China Electric Power Planning & Engineering Institute	1
Columbia University	1
EPM	1
Facebook	1
George Mason University	1
Google	1
Grubhub Holdings Inc.	1
Hughes Networks	1
IBM	1
Idaho National Laboratory	1
Institute for Transportation Research and Education	1
Intel	1
Large Engines Competence Center	1
Los Alamos National Laboratory	1
Mission Support and Test Services, LLC	1
NC State University	7
Naval Information Warfare Center	1

Table 4: Name of Company/Organization, Doctoral Degree Recipients, *continued*

	N
NetApp	1
Nordstrom	1
Northeastern University	1
PowerAmerica Institute	1
Princeton University	1
QuesTek Innovations	1
SUNY Polytechnic Institute	1
Schnabel Engineering, Inc.	1
The Ohio State University	1
Western Digital	1
Wolfspeed	1
Xiamen University	1
eBay	1
imec USA Nanoelectronics Design Center	1

Table 5: Name of Company/Organization, Master's Degree Recipients

	N
ARCADIS	1
Accenture	1
Adobe	1
Advanced Micro Devices	2
Amazon	23
Amazon Web Services	3
Analog Devices Inc.	1

Table 5: Name of Company/Organization, Master's Degree Recipients, *continued*

	N
Ancestry.com LLC	2
Anokiwave Inc.	1
Apple	3
Arrcus, Inc.	1
Atharva Enterprises	1
Audible Inc.	1
Banjo, Inc.	1
Becton, Dickinson & Company	1
Beroe Inc	1
Biotech Company	1
Boeing	1
Booth and Associates LLC	1
Burns & McDonnell	2
CACI	1
CITI, LLC	1
Cardinal Health	1
Cirrus Logic	1
Cisco Systems	2
Citrix Systems	1
Conduent	1
Cooper Tire & Rubber Company	1
Dell EMC	1
Dewberry	1
Dow Inc.	2

Table 5: Name of Company/Organization, Master's Degree Recipients, *continued*

	N
Eastman Chemical Company	1
Element Six	1
Facebook	5
GE Renewable Energy	1
General Dynamics Mission Systems	1
General Electric	1
GoDaddy	1
Goldman Sachs	1
Google	2
HDR Engineering Inc of the Carolinas	1
HDR Michigan, Inc.	1
IBM	4
Infineon Technologies	1
Intel	4
Intuitive Surgical	1
Juniper Networks	2
Kidde Technologies Inc	1
Kimley-Horn	1
LexisNexis	2
LinkedIn	1
MediaMath	1
Microsoft	1
Micross	1
Mimecast	1

Table 5: Name of Company/Organization, Master's Degree Recipients, *continued*

	N
NVIDIA	3
Naval Air Systems Command (NAVAIR)	2
NetApp	1
North Carolina Department of Transportation	1
Northrop Grumman	4
Novo Nordisk	1
Nutanix	1
Occidental Petroleum Corporation	1
Oracle Co.	2
PES Structural Engineers	1
Palo Alto Networks	1
Pfizer Inc.	1
Phononic	1
Porticos	1
Power Costs, Inc.	1
Qualcomm	4
Quanta Technology LLC	2
Red Hat	1
Red Ventures	1
Schweitzer Engineering Laboratories	3
Segal	1
Smithfield Foods	1
Solvay Specialty Polymers USA, LLC	1
Steele Foundation	1

Table 5: Name of Company/Organization, Master's Degree Recipients, *continued*

	N
Stewart	1
Teledyne Scientific & Imaging	1
Textron Systems	1
Torc Robotics	1
Twitter	2
Uber Technologies Inc	1
United States Armed Forces	1
Uzun+Case, LLC	1
VMware	3
Yes Solar Solutions	1
Zillow	1
acusight	1

Table 6: Location of Company (state), Doctoral Degree Recipients

	N	%
North Carolina	14	37%
California	6	16%
New York	4	11%
Virginia	2	5%
Maryland	2	5%
Pennsylvania	1	3%
Oregon	1	3%
New Mexico	1	3%
South Carolina	1	3%
Washington	1	3%
Massachusetts	1	3%
New Jersey	1	3%
Illinois	1	3%
Ohio	1	3%
Florida	1	3%

Table 7: Location of Company (state), Master's Degree Recipients

	N	%
North Carolina	41	27%
California	40	26%
Washington	29	19%
Massachusetts	4	3%
Utah	4	3%
Not sure	3	2%
Georgia	3	2%
Texas	3	2%
Oregon	3	2%
Virginia	3	2%
New York	3	2%
Maryland	3	2%
Florida	2	1%
Michigan	2	1%
New Jersey	1	1%
District of Columbia	1	1%
Ohio	1	1%
Kentucky	1	1%
Tennessee	1	1%
New Mexico	1	1%
Pennsylvania	1	1%
North Dakota	1	1%
Alabama	1	1%
Colorado	1	1%
Mississippi	1	1%

Table 8: Region of Company (inside/outside NC Triangle), Doctoral Degree Recipients

	N	%
Triangle	13	32%
Other NC	1	2%
Outside NC	27	66%

Table 9: Region of Company (inside/outside NC Triangle), Master's Degree Recipients

	N	%
Triangle	31	20%
Other NC	10	7%
Outside NC	111	73%

Table 10: Job Title, Doctoral Degree Recipients

	N
Assistant Professor	1
Data Scientist	1
Decision Scientist	1
Engineer	1
Engineer III	1
Hardware Engineer	1
Head Disk Interface Test Staff Engineer	1
Lecturer	1
MTS 3 Hardware	1
Material Design Engineer	1
Operations Research Scientist	1
Physicist / Scientist	1
Postdoc	2

Table 10: Job Title, Doctoral Degree Recipients, *continued*

Postdoctoral Research Associate	2
Postdoctoral Research Fellow	2
Postdoctoral Research Scholar	2
Postdoctoral Research Scientist	3
Postdoctoral Researcher	2
Process Development Scientist	1
Process Engineer	1
Research Associate	1
Research Scientist	2
Research Staff Member	1
Researcher	1
Senior Research Engineer	1
Senior Scientist	1
Senior Software Engineer	1
Software Developer II	1
Software Engineer	1
Staff Engineer	1
Staff Engineer II	1
Teaching Assistant Professor	1
Teaching Associate Professor	1

Table 11: Job Title, Master's Degree Recipients

	N
ASIC Verification Engineer	1
Aerospace Engineer	1
Application Engineer I	1
Application Security Researcher	1
Assistant Electrical Engineer	1
Associate Project Engineer	1
Associate Research Engineer	1
Bridge Design Engineer	1
Bridge Engineer in Training (EIT)	1
Business Analyst	1
CAD/CAE Software Developer	1
Continuous Improvement Engineer	1
Data Engineer III	1
Data Science Engineer	1
Data Scientist	4
Data Scientist / Software Engineer	1
Design Verification Engineer	1
DevOps Developer Engineer	1
Development Engineer	1
Electrical Engineer	1
Electrical Engineer II	1
Engineer	2
Engineer II	1
Engineer III	2

Table 11: Job Title, Master's Degree Recipients, *continued*

	N
Engineer Scientist Development Program (ESDP)	1
Enterprise Engineer	1
General Manager	1
Hardware Engineer	3
IC Design Engineer	1
Liaison Engineer	1
MMIC RF Design Engineer	1
Machine Learning Engineer	2
Manufacturing Engineer	1
Manufacturing Lead	1
Manufacturing Quality Engineer	1
Manufacturing Technician	1
Materials and Processes Design Engineer	1
Mechanical Engineer	2
Member of Technical Staff	3
Member of Technical Staff II	1
Network Production Engineer	1
Pixel Design Verification Engineer	2
Power Electronics Controls Engineer	1
Principal Energetics Manufacturing Engineer	1
Process Engineer	3
Product Development Engineer	1
Project Engineer	3
Project Manager	3

Table 11: Job Title, Master's Degree Recipients, *continued*

	N
Quality Assurance Area Specialist I	1
Regulatory Compliance Manager	1
Research Engineer	1
Research Scientist	1
Road Maintenance Engineer	1
Senior Actuarial Developer	1
Senior Civil Engineer	1
Senior Design Engineer	1
Senior Electrical Engineer	1
Senior Software Engineer	3
Signal Officer	1
Silicon Design Engineer II	2
Site Reliability Engineer	1
Site Reliability Engineer II	1
Software Analyst	1
Software Developer	3
Software Development Engineer	23
Software Development Engineer I	2
Software Engineer	20
Software Engineer II	3
Software Engineer, Cost Management	1
Software Engineer, Performance	1
Software Quality Assurance Engineer	1
Staff RFIC Design Engineer	1

Table 11: Job Title, Master's Degree Recipients, *continued*

	N
Staff Software Engineer	1
Structural Analyst	1
Structural Engineer	2
Structural Engineer I	1
Substation Engineering Specialist	1
Systems Engineer	2
Systems Reliability Engineer	1
Technology Development Module & Integration Yield Engineer	1
Technology Manager - Materials Specialist	1
Technology Principle	1
Verification Engineer	2

Table 12: Resources Used to Help Get/Locate Job, by Degree Received*

	COE Overall		Doctoral		Masters	
	N	%	N	%	N	%
Internship/externship	85	52%	12	30%	73	58%
Internet: LinkedIn	74	45%	10	25%	64	51%
Campus or college career center	45	27%	5	13%	40	32%
Career fair at NC State	34	21%	3	8%	31	25%
Personal/professional connection(s) within the company	29	18%	17	43%	12	10%
Family/friends/classmates/co-workers	27	16%	5	13%	22	18%
NC State faculty member	24	15%	16	40%	8	6%
Optional Practical Training (OPT)	23	14%	5	13%	18	14%
Consultation w/ NCSU Career Counselor/Coach	19	12%	2	5%	17	14%
Applied for job via ePACK	16	10%	0	0%	16	13%
Co-op experience	16	10%	6	15%	10	8%
Employer info session on campus	13	8%	3	8%	10	8%
Internet (Other)	13	8%	4	10%	9	7%
On-campus interviewing	10	6%	1	3%	9	7%
Professional association (members, conferences, publications, etc.)	7	4%	6	15%	1	1%
Student teaching experience	6	4%	2	5%	4	3%
Career fair off campus	4	2%	0	0%	4	3%
Volunteer work	3	2%	1	3%	2	2%
Employer found resume on ePACK	2	1%	0	0%	2	2%
Staffing agency	2	1%	1	3%	1	1%
Clinical placement	0	0%	0	0%	0	0%
Other	3	2%	2	5%	1	1%

*Respondents could select more than one resource.

**Question was asked of those who indicated they would be employed full-time in a position they had obtained during their graduate program or at the time of graduation (i.e., excluding those who said they would be employed in a position they had obtained prior to beginning their graduate program).

Further Education (college overall)

Table 13: Status for Further Graduate/Professional School Attendance, Master's Degree Recipients (among those planning to attend)

	N	%
Am already enrolled and pursuing the degree	18	78%
Have been accepted and know where I'm going	1	4%
Have been accepted but undecided	.	0%
Have applied, but not yet been accepted	.	0%
Have not applied but plan to do so within the next year	4	17%

Information provided in the tables below is collected and reported only for respondents who indicated that at the time of the survey they had been accepted to graduate/professional school to pursue another degree and were currently enrolled or knew where they would be going.

Table 14: Name of Graduate/Professional School Students Will be Attending, Master's Degree Recipients

	N
NC State University	17
Stony Brook University	1
The University of Texas at Austin	1

Table 15: Location of Graduate/Professional School Students Will be Attending, Master's Degree Recipients

	N	%
North Carolina	17	89%
New York	1	5%
Texas	1	5%

Table 16: Type of Degree Pursuing, Master's Degree Recipients*

	N	%
Master's	1	5%
Doctoral	18	95%
Professional	0	0%
Other	0	0%

*Respondents could select more than one degree.

Table 17: Master's Degree Pursuing, Master's Degree Recipients

	N
MBA	1

Table 18: Doctoral Degree Pursuing, Master's Degree Recipients

	N
PhD	18

Table 19: Academic Program, Master's Recipients*

	N
BME	1
Chemical & Biomolecular Engineering	1
Chemical Engineering	2
Chemical and Biomolecular Engineering	1
Civil Engineering PhD	1
Civil, Construction, and Environmental Engineering	1
Computer Engineering	1
Computer Science	2
ECE	1
Industrial and Systems Engineering	1
MBA	1
Materials Science and Engineering	2
Mechanical Engineering	1
Nuclear Engineering PhD	1
PhD in MSE (Final semester)	1

*Academic program has not been cleaned. Responses are verbatim.

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