

Table A.1: Course Equivalency for Courses Common to All Engineering Degree Programs at NCE/NJIT

Brookdale Community College			New Jersey Institute of Technology		
Course #	Title	C.H.	Course #	Title	C.H.
ENGL121	English Composition: The Writing Process	3	HUM 101	English Composition, Writing, Speaking, Thinking I	3
PHYS121	General Physics I	4	Phys 111	Physics I	3
			Phys 111A	Physics I Lab	1
CHEM101	General Chemistry I	5	Chem 125	General Chemistry I	3
MATH171	Calculus I	4	Math 111	Calculus I	4
CADD 121	Completion of CADD 121 will waive FED 101 requirement for AS degree holders	2	FED 101	Fundamental of Engineering. Design	2
			PE xxx	Physical Education (GUR)	1
			PE xxx	Physical Education (GUR)	1
ENGL122	English Composition: Writing and Research	3	HUM 102	English Composition, Writing, Speaking, Thinking II	3
PHYS122	General Physics II	4	Phys 121	Physics II	3
			Phys 121A	Physics II Lab	1
			Chem 124*	General Chemistry Lab Not required for EE and CoE	1 0
CHEM102	General Chemistry II	5	Chem126*	General Chemistry II Not required for EE and CoE	3 0
COMP137	Programming for Engineers	3	CS 101 or CS 113	Computer Programming and Problem Solving or Introduction to Computer Science (for EE or CoE)	3
MATH172	Calculus II	4	Math 112	Calculus II	4
MATH273	Calculus III	4	Math 211 or Math 213	Calculus III A or Calculus III B (for EE or CoE)	3 or 4
MATH274	Elementary Differential Equations	4	Math 222	Differential Equations	4
ECON107	Economics	3	SS 201	Economics	3
HIST 105	World Civilization I	3	HUM/HIST	Cultural History Elective: Hum 211, Hum212, or Hist 213	3
ANTH105 HGEO105 PSYC106	Cultural Anthropology Human Geography Introduction to Psychology II	3	SS elect**	Econ 2xx, R070:2xx, R202:2xx, R790:2xx, or R830:2xx, R920:2xx	3
TOTAL Toward Degree (Total for EE and CoE)		52 (49)		TOTAL NJIT (EE and CoE)	52 (49)

*Not required for electrical engineering (EE) and computer engineering (CoE)

**NJIT students not required to take in year 1 and 2.

Table B.1: Biomedical Engineering [No Brookdale Technical Elective Category]

Brookdale Community College			Biomedical Engineering Program		
Course #	Title	C.H.	Course #	Title	C.H.
			BME 105	Intro. to Human Physiology I	2
			BME 106	Intro. to Human Physiology II	1
			BME 301	Electrical Fundamentals of Biomedical Engineering	3
			BME 302	Mechanical Fundamentals of Biomedical Engineering	3
			BME 303	Biological and Chemical Foundation of Biomedical Engr.	3
			Math 279	Statistics and Probability for Engineering	2
			BME 310	Biomedical Computing	3
MATH285	Linear Algebra (not required by Brookdale)	3	Math 337	Linear Algebra	3
CHEM203	Organic Chemistry I	5	Chem 243	Organic Chemistry	3

Table B.2: Chemical, Biological, and Pharmaceutical (CBPE) Engineering

Brookdale Community College			CBPE Engineering Program		
Course #	Title	C.H.	Course #	Title	C.H.
			ChE 210	Chemical Process Calculation I	2
			ChE 210W	Chemical Process Calculation I	0
			ChE 230	Chemical Engineering Thermodynamics I	3
			ChE 230 W	Chemical Engineering Thermodynamics I	0
CHEM 203	Organic Chemistry I	5	Chem 245	Organic Chemistry for Chemical Engineers	4
CHEM 204	Organic Chemistry II	5	Chem 238	Analytical Organic Chem lab for Chemical Engineers	2
			ChE 240	Chemical Process Calculations II	3
			ChE 240W	Chemical Process Calculations II	0
			ChE 260	Fluid Flow	3
			Chem 236	Physical Chemistry for Chemical Engineers	4
			Math 235	Survey of Prob. and Statistics	1
ENGI 101 & 205	Engineering Mechanics I and Strength of Materials [ENGI 205 not req. for BCC Chem. Tech. Electives].		Mech 320	Statics and Strength of Materials	3

Table B.3: Civil and Environmental Engineering

Brookdale Community College			Civil & Environmental Engineering Program		
Course #	Title	C.H.	Course #	Title	C.H.
ENGI261	Surveying	4	CE 200	Surveying	3
			CE 200A	Surveying Laboratory	1
			Math 235	Survey of Prob. and Statistics	1
ENGI 101	Engineering Mechanics I	3	Mech 235	Statics	3
			EnE 262	Intro. to Environmental Engrg.	3
			CE 210	Construction Materials and Procedures	3
			CE 260	Civil Engineering Methods	3
ENGI205	Strength of Materials	3	Mech 237	Strength of Materials	3

Table B.4: Computer Engineering

Brookdale Community College			Computer Engineering Program		
Course #	Title	C.H.	Course #	Title	C.H.
COMP228	Data Structures (not required by BCC)	3	CS 114	Intro. to Computer Science II	3
ENGI241	Principles of EE I (Circuits)	4	ECE 231	Circuits and Systems	3
ENGI251	Digital I	3	ECE 251	Digital Design	3
ENGI242	Principles of EE I (Electronics)	4	ECE 271	Electronic Circuits	3
COMP 135 or ELEC 242	Computer Architecture Using Assembly Language or Intro to Microprocessors-Arch & Assembly Language (not required in Brookdale program)	3 4	ECE 252	Microprocessors	3
ENGI252	Principles of EE III (Circuits)	3	ECE 232	Circuits and Systems II	3
	Excess credit from ENGI 241	1	ECE 291	Electrical Engineering Lab	1

Table B.5: Electrical Engineering

Brookdale Community College			Electrical Engineering Program		
Course #	Title	C.H.	Course #	Title	C.H.
ENGI241	Principles of EE I (Circuits)	4	ECE 231	Circuits and Systems	3
ENGI251	Digital I	3	ECE 251	Digital Design	3
ENGI242	Principles of EE I (Electronics)	4	ECE 271	Electronic Circuits	3
COMP 135 or	Computer Architecture Using Assembly Language or	3	ECE 252	Microprocessors	3

ELEC 242	Intro to Microprocessors-Arch & Assembly Language (not required in Brookdale program)	4			
ENGI252	Principles of EE III (Circuits)	3	ECE 232	Circuits and Systems II	3
	Excess credit from ENGI 241	1	ECE 291	Electrical Engineering Lab	1
PHYS223	General Physics III	4	Phys 234	Physics III	3

Table B.6: Mechanical Engineering

Brookdale Community College			Mechanical Engineering Program		
Course #	Title	C.H.	Course #	Title	C.H.
			Math 279	Statistics and Probability for Engineers	2
ENGI 206	*Material Properties & Processes	3	ME 215	Engineering Materials and Processes	3
ENGI216	Kinematics and Dynamics of Machinery	3	ME 231	Kinematics of Machinery	3
ENGI101	Engineering Mechanics I	3	Mech 234	Engineering Mechanics	2
ENGI102	Engineering Mechanics II	3	Mech 236	Dynamics	2
ENGI205	Strength of Materials	3	Mech 237	Strength of Materials	3

*Faculty discussion ongoing regarding lab requirement

Table B.7: Industrial Engineering

Brookdale Community College			Industrial Engineering Program		
Course #	Title	C.H.	Course #	Title	C.H.
			IE 203	Applications of Computer Graphics to Industrial Enrg.	2
ENGI 101 & 205	Engineering Mechanics I and Strength of Materials	6	Mech 320	Statics and Strength of Materials	3
ENGL225	Technical Writing (not required in Brookdale program)	3	Eng 352	Technical Writing	3
			IE 224	Production Process Design	3
ENGI102	Engineering Mechanics II	3	Mech 236	Dynamics	2
			IE 331	Applied Statistical Methods	3