

PHYSICS – ELECTRICAL ENGINEERING TRACK

3+2 DUAL DEGREE ENGINEERING PROGRAM WITH NOTRE DAME

COURSE REQUIREMENTS

CORE Requirements	Credits	King's Requirements	Credits	Notre Dame Requirements	Credits
___ CORE 090 First Yr Exp.	1	___ PHYS 113 Physics for Sci. & Eng. I	3	___ CSE 20133 Intro to Computing for EE	3
___ CORE 100 Lib Arts Sem.	3	___ PHYS 113L Phys. for Sci./Eng. I Lab	1	___ CSE 20221 Logic Design	-
___ CORE 110 Effect Writ.	3	___ PHYS 114 Physics for Sci. & Eng. II	3	___ EE 20224 Intr to Electric Circuit Analysis	-
___ CORE 115 or 116 Oral Comm.	3	___ PHYS 114L Phys. for Sci./Eng. II Lab	1	___ EE 20225 Intro to Electrical Engineering	-
___ CORE 131 or 133 Civilization	3	___ PHYS 231 Modern Physics	3	___ EE 20234 Electronic Circuits	3
___ CORE 140 or 141-145 Forgn.	3	___ PHYS 231L Modern Physics Lab	1	___ EE 20242 Electronics	4
___ CORE 150-159 Soc. Sci. ¹	3	___ PHYS 233 Electronics I	3	___ EE 30344 Signals & Systems	3
___ CORE 160-169 Literature	3	___ PHYS 233L Electronics I Lab	1	___ EE 30347 Fund of Semiconductors	3
___ CORE 170-179 The Arts	3	___ PHYS 330 Classical Mech.	3	___ EE 30348 Electromagnetic Fields	-
___ CORE 180-189 Amer. Studies ¹	3	___ PHYS 350 Thermo/Stat. Mech.	3	___ EE 30363 Random Phenomena In EE	3
___ CORE 190-199 Global Studies ¹	(3)	___ PHYS 371 Electricity & Magnetism I	3	___ EE 41430 Design I	3
___ CORE 250-259 Syst. Theology	(3)	___ PHYS 440 Quantum Mech.	3	___ EE 41440 Design II	3
___ CORE 260-269 Mor. Theology	(3)	___ PHYS 490 Senior Seminar	3	___ EE Elective	3
___ CORE 280 Philos. I	(3)	___ PHYS Elective	-	___ EE Elective	3
___ CORE 281-289 Philos. II	(3)	___ PHYS Elective	-	___ EE Elective	3
A student will need to complete five (5) of King's College CORE requirements at Notre Dame		___ CHEM 113 Gen. Chem. I	3	___ EE Elective	3
		___ CHEM 113L Gen. Chem. I Lab	1	___ EE Elective	3
		___ CHEM 114 Gen. Chem. II	3	___ EE Elective	3
		___ CHEM 114L Gen. Chem. II Lab	1	___ Technical Elective	-
		___ MATH 129 Calculus I	4	___ Technical Elective	3
		___ MATH 130 Calculus II	4	___ Technical Elective	3
		___ MATH 231 Calculus III	4	___ Engineering Science Elective	-
		___ MATH 237 Math Meth. for Phys. Sci.	3	___ A&L Course (King's CORE)	3
		___ MATH 238 Diff. Equations	3	___ A&L Course (King's CORE)	3
		___ ENGR 150 Engineering Seminar	2	___ A&L Course (King's CORE)	3
		___ ENGR 250 System Design & Analysis	3	___ A&L Course (King's CORE)	3
		___ ENGR 250L Syst. Design & Analysis Lab	1	___ A&L Course (King's CORE)	3
		___ CS 111 Programming for Sci. and Eng.	3		
		___ CS 111L Prog. for Sci. and Eng. Lab	-		
		___ CS 270 Computer Organization	3		
		___ CS 270L Computer Organization Lab	1		
28		70		64	
Total Credits = 162					

Note: One PHYS Elective required for the King's degree is satisfied by EE 20242 Electronics, and the other with EE 30347 Fund of Semiconductors.
 PHYS 233/L satisfies the Notre Dame requirement for EE 20224 Intro to Electric Circuit Analysis and EE 20225 Intro to Electrical Engineering
 PHYS 371 satisfies the Notre Dame requirement for EE 30348 Electromagnetic Fields
 CS 270 satisfies the Notre Dame requirement for CSE 20221 Logic Design
 PHYS 350 will satisfy one of Notre Dame's Technical Elective requirements
 PHYS 330 will satisfy Notre Dame's Engineering Science Elective requirement

¹Students are required to take CORE 150, CORE 180 **OR** CORE 190 to fulfill the Interdisciplinary CORE requirement.

- If a student takes CORE 150, then he/she should choose from 181 – 188 to fulfill the 18x requirement AND from 191 – 198 to fulfill the 19x requirement.
- If a student takes CORE 180, then he/she should choose from 151 – 158 to fulfill the 15x requirement AND from 191 – 198 to fulfill the 19x requirement.
- If a student takes CORE 190, then he/she should choose from 151 – 158 to fulfill the 15x requirement AND from 181 – 188 to fulfill the 18x requirement.

General Information:

The 3-2 engineering program is a dual degree program. Students spend 3 years at King's College (King's) taking math, science and CORE courses and then transfer to Notre Dame (ND) for 2 years, focusing on engineering courses in their chosen field. Admission into Notre Dame requires a minimum GPA of 3.30 after 5 semesters of college study. Students must earn at least 60 credits from ND to receive the ND degree. Upon successful completion of the program at Notre Dame, students will receive *both* a B.S. in Physics from King's and a B.S. in Electrical Engineering from Notre Dame. *(For more information, refer to the college catalog).*

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SUGGESTED SEQUENCE

- Use the information below as a guide when selecting courses.
- Refer to the reverse side when selecting major courses, major electives, core courses, and free electives when applicable.
- Consult your Academic Advisor prior to course registration.
- Refer to the King's College Catalog and/or website for course titles and descriptions.
- Choose one course from each CORE category as listed on the reverse side.
- CORE courses may be taken in any order approved by the academic advisor with the following conditions:
 - CORE 100 and CORE 110 should be taken in the first year.
 - CORE 115 (or 116) should be taken within the first two years.
 - For students selecting a Foreign Language (CORE 14x), every effort should be made to register for that language in the first available semester at King's.

King's College					
1st Year - Fall		cr.	1st Year - Spring		cr.
_____	CHEM 113 Gen. Chem. I	3	_____	CHEM 114 Gen. Chem. II	3
_____	CHEM 113L Gen. Chem. I Lab	1	_____	CHEM 114L Gen. Chem. II Lab	1
_____	PHYS 113 Physics for Scientists & Engineers I	3	_____	PHYS 114 Physics for Scientists & Engineers II	3
_____	PHYS 113L Physics for Sci. & Eng. I Lab	1	_____	PHYS 114L Physics for Sci. & Eng. II Lab	1
_____	MATH 129 Calculus I	4	_____	ENGR 150 Engineering Seminar	2
_____	CORE	3	_____	MATH 130 Calculus II	4
_____	CORE 090 First Year Exp.	1	_____	CORE	3
		16			17
2nd Year - Fall			2nd Year - Spring		
_____	PHYS 231 Modern Physics	3	_____	PHYS 330 Classical Mech.	3
_____	PHYS 231L Modern Physics Lab	1	_____	PHYS 233 Electronics I	3
_____	MATH 231 Calculus III	4	_____	PHYS 233L Electronics I Lab	1
_____	MATH 237 Math Methods for Phys. Sci.	3	_____	ENGR 250 System Design & Analysis	3
_____	CS 111 Programming for Sci. and Eng.	3	_____	ENGR 250L Syst. Design & Analysis Lab	1
_____	CS 111L Prog. for Sci. and Eng. Lab	0	_____	MATH 238 Diff. Equations	3
_____	CORE	3	_____	CORE	3
		17			17
3rd Year - Fall			3rd Year - Spring		
_____	PHYS 371 Electricity & Magnetism I	3	_____	PHYS 440 Quantum Mech.	3
_____	PHYS 350 Thermo/Stat. Mech.	3	_____	PHYS 490 Senior Seminar	3
_____	CORE	3	_____	CS 270 Computer Organization	3
_____	CORE	3	_____	CS 270L Computer Organization Lab	1
_____	CORE	3	_____	CORE	3
		15			16
Notre Dame					
4th Year - Fall			4th Year - Spring		
_____	CSE 20133 Intro to Computing for EE Majors	3	_____	EE 20242 Electronics	4
_____	EE 20234 Electronic Circuits	3	_____	EE 30363 Random Phenomena in EE	3
_____	EE 30344 Signals & Systems	3	_____	EE Elective	3
_____	EE 30347 Fundamentals of Semiconductors	3	_____	EE Elective	3
_____	A&L Course (King's CORE)	3	_____	A&L Course (King's CORE)	3
		15			16
5th Year - Fall			5th Year - Spring		
_____	EE 41430 Design I	3	_____	EE 41440 Design II	3
_____	EE Elective	3	_____	EE Elective	3
_____	EE Elective	3	_____	EE Elective	3
_____	Technical Elective	3	_____	Technical Elective	3
_____	A&L Course (King's CORE)	3	_____	A&L Course (King's CORE)	3
_____	A&L Course (King's CORE)	3			
		18			15

The standard semester course load is five courses consisting of 15 – 17 credits. A student may take 18 credits if the science lab puts them over 17 credits. (for more information about credit loads, please see the college catalog)