

Longwood University/Old Dominion University

ARTICULATION AGREEMENT 2011-2012

Bachelor of Science in Physics to a Bachelor of Science in Computer Engineering

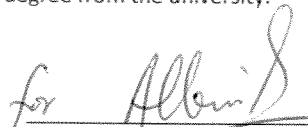
Longwood University B.S. degree in Physics				Old Dominion University B.S. degree program in Computer Engineering			
Major-*** require C- or better for transfer				Major			
CHEM	111	***Fundamental Chemistry I	4	CHEM	121/ 122N	Foundations of Chemistry	4
CHEM	112	***Fundamental Chemistry II	4	CHEM	123/ 124N	Foundations of Chemistry	4
PHYS	201	***University Physics I	4	PHYS	231N	University Physics	4
PHYS	202	***University Physics II	4	PHYS	232N	University Physics	4
MATH	261	***Calculus I	4	MATH	211	Calculus I	4
MATH	262	***Calculus II	4	MATH	212	Calculus II	4
MATH	361	***Calculus III	4	MATH	312	Calculus III	4
MATH	362	***Differential Equations	3	MATH	307	Ordinary Differential Equations	3
CMSC	204	***Intro Programming	3	CS	150	Problem Solving and Programming I	3
PHYS	260	Introduction to Experimental Design	2	PHYS	2ELE	Elective	2
PHYS	321	Modern Physics I	3	PHYS	323	Modern Physics I	3
PHYS	324	Thermodynamics	3	PHYS	454	Thermal and Statistical Physics	3
PHYS	352	Mechanics	3	PHYS	319	Analytical Mechanics	3
PHYS	332	Electricity and Magnetism	3	PHYS	320	Intro to Electromagnetic Theory	3
PHYS	331	AC/DC Circuits	4	EET	350	Combination of PHYS 341+ 331= EET 350 (substitute for ENGN 110)	4
PHYS	341	Electronics	4	EET	350	Combination of PHYS 341+ 331= EET 350 (substitute for ECE 201)	4
PHYS	ELE	Electives (Please see Longwood catalog for list of applicable courses)	6	PHYS	ELE	Electives	6
Total in Major			62	Total in Major			62
General Education				General Education			
*ENGL	150	Writing and Research	3	ENGL	110C	English Composition	3
ART Achievement	REQ	One from ART 125, 160, or THEA 101	3	FPAP	1REQ	Human Creativity Way of Knowing	3
ENGL	REQ	Choose one literature course from ENGL 202, 201, or 203	3	LIT	1REQ	Literature Way of Knowing	3
HIST	100 or 110	Western Civilization	3	HISP	1REQ	Interpreting the Past Way of Knowing	3
Social Science	REQ	Select one from courses listed in Longwood catalog	3	SSCP	1REQ	Human Behavior Way of Knowing	3
FORGN LANG	REQ	FREN 101, SPAN 201 OR GERM 201	3	FLP	1REQ	Foreign Language	3
PHED or RECR	101	Health / Physical Education	2	PE	1ELE	Elective	2
LSEM	100	Longwood Seminar	1	UNIV	100	University Orientation	1
DIVERSITY	REQ	Select one from courses listed in Longwood catalog	3		ELE pr REQ	Elective or General Education Requirement	3
CMSC/ MATH	350	Ethics in Math or Computer Science	3	GNRL	3ELE	Upper Division Elective (substitute for ENMA 480)	3
ENGL	400	Adv Writing Seminar	3	ENGL	327W	Advance Composition (substitute for ENGL 231C)	3
Total Additional General Education			30	Total Additional General Education			30
Total credits earned at Longwood University			92	Total Credits transferred to ODU			92

Additional Requirements - ODU			
ECE	200	Engineering Analysis Tools	3
ECE	241	Fundamentals of Computer Engineering	4
ECE	202	Circuits, Signals & Linear Systems	3
ECE	287	Fundamental Circuits Lab	2
CS	250	Problem Solving & Programming	4
CS	252	Intro to Unix	1
CS	381	Discrete Structures	3
ECE	313	Electronic Circuits	4
ECE	341	Digital System Design	3
CS	361	Advanced Data Structures & Algorithms	3
CS	471	Operating Systems	3
ECE	381	Discrete -time Signal Processing	3
ECE	304	Probability, Statistics, & Reliability	3
ECE	346	Microcontrollers	3
ECE	443	Computer Architecture	3
CS	350	Software Engineering	3
ECE	484W	Computer Engineering Design I	3
ECE	486	Prep to ECE Design II	1
ECE	4XX	Technical Elective I	3
ECE	4XX	Technical Elective II	3
ECE	4XX	Technical Elective III	3
ECE	4XX	Technical Elective IV	3
ENGN	401	FE Review	1
ECE	487	ECE Design II	2
Total Credits to be Taken at ODU			67
Total Transfer Credits in Major			62
Total Credits in General Education			30
Total Credits Earned for Dual B.S. Degree			159

Student must earn a grade of C- or better from Longwood to transfer courses to Old Dominion University. Students must complete at least 32 credit hours at Old Dominion University to receive a baccalaureate degree from the university.

 8/15/11
 Signature Date

Dr. Melissa Rhoten
 Chair, Department of Chemistry & Physics
 Longwood University

for  6/3/11
 Signature Date

Dr. Shirshak Dhali
 Chair, Batten College of Engineering and
 Technology (Electrical & Computer Engineering)
 Old Dominion University

 8/15/11
 Signature Date

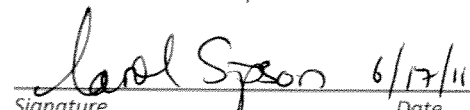
Dr. Michelle Parry
 Director, Dual Degree and Physics Program
 Longwood University

 6/3/2011
 Signature Date

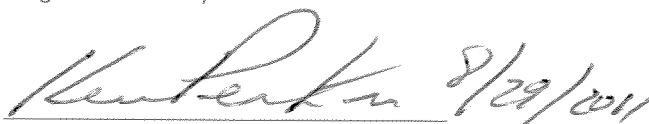
Dr. Oktay Baysal
 Dean, Batten College of Engineering and
 Technology
 Old Dominion University

 8/26/11
 Signature Date

Dr. Charles Ross
 Dean, Cook-Cole College of Physics
 Longwood University

 6/17/11
 Signature Date

Dr. Carol Simpson
 Provost and Vice-President, Academic Affairs
 Old Dominion University

 8/29/2011
 Signature Date

Dr. Ken Perkins
 Interim Vice President, Academic Affairs
 Longwood University

Computer Engineering Schedule

LU Physics + ODU Computer Engineering (Total Credits Listed-67)

Fall 1 st Semester ODU (7 th semester LU)	credits	Spring 2 nd Semester ODU (8 th semester LU)	
ECE 200 – Engineering Analysis Tools	3	ECE 313 – Electronic Circuits (Pre-re: ECE 202; Pre/Co-re ECE 241)	4
ECE 241 – Fundamentals of Computer Engineering (Pre-re: MATH 211, CS 150)	4	ECE 341 – Digital System Design (Pre-re: ECE 241)	3
ECE 202 – Circuits, Signals and Linear Systems (Pre-re: ECE 201)	3	ECE 346 – Microcontrollers (Pre-re: ECE 241)	3
ECE 287 – Fundamental Circuits Lab (Pre-re: ECE 201, CS 150; Co-re: ECE 202)	2	CS 361 – Advanced Data Structures and Algorithms (Pre-re: CS 250, 252)	3
CS 250 – Problem Solving and Programming II (Pre-re: CS 150; Co-re CS 252)	4	ECE Technical Elective	3
CS 252 – Introduction to UNIX for Programmers (Co-re: CS 250)	1		
Total	17	Total	16

Graduate with BS Physics LU

Fall 3 rd Semester ODU		Spring 4 th Semester ODU	
ECE 484W – Computer Engineering Design I (Pre/Co-re: ECE 313; Pre-re: ECE 341, 346; Co-re: ECE 443)	3	ECE 487 – ECE Senior Design II (Pre-re: ECE 486)	2
ECE 443 – Computer Architecture (Pre-re: ECE 341, 346; Pre/Co-re: ECE 304, 484W)	3	ECE 304 – Probability, Statistics and Reliability (Pre-re: MATH 212)	3
CS 350 – Software Engineering (Pre-re: CS 361)	3	CS 381 – Discrete Structures (Pre-re: CS 150, MATH 163)	3
ECE 381 – Intro to Discrete Time Signal Processing	3	CS 471 – Operating Systems (Pre-re: CS 361, ECE 443)	3
ECE Technical Elective	3	ECE Technical Elective	3
ECE 486 – Prep for ECE Senior Design II (Co-re: ECE 485W)	1	ECE Technical Elective	3
		ENGN 401 – FE Review	1
Total	16	Total	18