Applied Computing Core Course

Fall 2021 Suggested Schedule

Freshman – 1st Semester		15
WSUE102A	First Year Seminar in Tech and Innovation *(S&BS + FYS)*	3
COMM111	Public Speaking	3
MATH111	College Algebra	3
ENGL101	College English I	3
ENGT121	Cybersecurity Awareness *(fall only)*	3
Freshman – 2nd Semester		**15**
PSY111	General Psychology *(S&BS)*	3
MATH123	College Trig P: MATH111	3
ENGL102	College English II P:ENGL101	3
ENGR220	Applied Analog and Digital Electronic *(spr only)* P: MATH111	3
ENGT222	Applied Computing and Networks 1 *(spr only)* P: MATH111	3

Sophomore – 1st Semester		15
PHYS213	General College Physics I P:MATH123	5
ENGT201	Introductory Design Project P: WSUE102A, ENGR302 or ID300	1
ENGT321	Applied Computing and Networks 2 *(fall only)* P: ENGT222	3
ECON201	Principles of Macro Econ *(S&BS)* or IME255	3
	TE - *Recommend PHIL125 Introductory Logic*	3
Sophomore – 2nd Semester		**17**
PHYS214	General College Physics II P: PHYS213	5
PSY323	Social Psychology *(S&BS)* P: PSY111	3
	FA *(at 300 level or above unless STAT370 is taken)*	3
ENGT322	Applied Programing & Scripting *(spr only)* P: ENGT222	3
ENGT324	Applied Web Apps & DB Dev *(spr only)* P: ENGT222	3

Junior – 1st Semester		14
ENGT301	Intermediate Project Design P: ENGT201	2
PSY301 or STAT370	Psychological Statistics P: PSY111 (FA must be 300 level) or Elementary Statistics P: MATH111	3
	Elective Certificate or TEs	9
Junior – 2nd Semester		**16**
ENGT326	Cyber Operations *(spr only)* p: ENGT121, ENGT321 & ENGT322	4
PHIL385	Engineering Ethics *(Humanities)*	3
	Elective Certificate or TEs	9

Senior – 1st Semester		15
ENGT 401	Senior Design Project I P: ENGT301 & Senior or dept consent	3
	Elective Certificate or TEs	12
Senior – 2nd Semester		**13**
ENGT 402	Senior Design Project II P: ENGT401	3
	Elective Certificate or TEs	10

Elective Certificates - Studetns are required to completeat least three Certificates

Cybersecurity Essentials Certificate		
Senior – 1st Semester		
ENGT461	Digital Forensics *(fall only)* P: ENGT326	3
ENGT463	Cyber Risk Management *(fall only)* P: ENGT326	3
Senior – 2nd Semester		
ENGT462	Cyber Physical Systems *(spr only)* P: ENGR220, ENGT326	4
ENGT464	Web Application Security *(spr only)* P: ENGT324, ENGT326	3

Cyber-Physical Systems Certificate		
Junior – 1st Semester		
MATH242	Calculus I P: MATH123	5
Junior – 2nd Semester		
ENGT320	Circuits Technology *(spr only)* P: MATH 242 with "C-"	4
Senior – 1st Semester		
ENGT361	Industrial Controls & Instr *(fall only)* P: ENGT320 & MATH243	4
Senior – 2nd Semester		
ENGT462	Cyber Physical Systems *(spr only)* P: ENGR220, ENGT326	4

Data and Web Security Certificate		
Junior – 1st Semester		
BDAM161,2,	Business Software P/C: MATH111	3
Senior – 1st Semester		
ENGT463	Cyber Risk Management *(fall only)* P: ENGT326	3
MIS605	Systems Analysis & Design *(fall only)* P: junior standing	3
Senior – 2nd Semester		
ENGT464	Web Application Security *(spr only)* P: ENGT324, ENGT326	4
MIS696	Management of the IS Function *(spr only)* P/C: MIS605	3

Human Factors in Tech and Security Certificate		
Junior – 1st Semester		
PSY323	Social Psychology P: PSY111	3
ENGT363	Human Threats to Cyber Security P: ENGT121	3
Junior – 2nd Semester		
PSY405	Human Factors Psychology P: PSY111	3
Senior – 1st Semester		
ENGT461	Digital Forensics *(fall only)* P: ENGT326	3
ENGT463	Cyber Risk Management *(fall only)* P: ENGT326	3

Game and Simulation Programing Certificate *(Fall 2021)*		
Junior – 1st Semester		
MART232	Game Design I *(fall only)* P: MART260	3
Junior – 2nd Semester		
MART332	Game Design II *(spr only)* P: MART232	3
PSY508AB	Psychology of Video Games *(spr only)* P: PSY111	3
Senior – 1st Semester		
ENGT371	Applied Object Orientated Programing P: ENGT322	3
Senior – 2nd Semester		
ENGT574	Mod & Sim of Disc Event System P: ENGT354	4

Applied Data Analysis Certificate *(Spring 2021)*		
Junior – 1st Semester		
MATH242	Calculus I P: MATH123	5
Junior – 2nd Semester		
MATH321	Discrete Structures I P: MATH242	3
Senior – 1st Semester		
ENGT441	Analysis of Decision Processes P: ECON201 or IME255	3
Senior – 2nd Semester		
ENGT572	Applied Machine learning P: ENGT322	4

Applied Computing Core Course

WICHITA STATE UNIVERSITY
COLLEGE OF ENGINEERING
Engineering Technology

Fall 2021 Suggested Schedule
Total Credit Hours **120**

Freshman – 1st Semester		15
WSUE102A	First Year Seminar in Tech and Innovation *(S&BS + FYS)*	3
COMM111	Public Speaking	3
MATH111	College Algebra	3
ENGL101	College English I	3
AC121	Cybersecurity Awareness *(fall only)*	3

Freshman – 2nd Semester		15
PSY111	General Psychology *(S&BS)*	3
MATH123	College Trig P: MATH111	3
ENGL102	College English II P:ENGL101	3
ENGR220	Applied Analog and Digital Electronic *(spr only)* P: MATH111	3
AC222	Applied Computing and Networks 1 *(spr only)* P: MATH111	3

Sophomore – 1st Semester		15
PHYS213	General College Physics I P:MATH123	5
AC201	Introductory Design Project P: WSUE102A, ENGR302 or ID300	1
AC321	Applied Computing and Networks 2 (fall only) P: AC222	3
ECON201	Principles of Macro Econ *(S&BS)* or IME255	3
	TE - *Recommend PHIL125 Introductory Logic*	3

Sophomore – 2nd Semester		17
PHYS214	General College Physics II P: PHYS213	5
PSY323	Social Psychology *(S&BS)* P: PSY111	3
	FA *(at 300 level or above unless STAT370 is taken)*	3
AC322	Applied Programing & Scripting (spr only) P: AC222	3
AC324	Applied Web Apps & DB Dev (spr only) P: AC222	3

Junior – 1st Semester		14
AC301	Intermediate Project Design P: AC201 or ENGR205	2
PSY301	Psychological Statistics P: PSY111 (If taken FA must be 300 level)	3
	or	
STAT370	Elementary Statistics P: MATH111	
	Elective Certificate or TEs	9

Junior – 2nd Semester		16
AC326	Cyber Operations (spr only) p: AC121, AC321 & AC322	4
PHIL345	Ethics and Computers *(Humanities)*	3
	Elective Certificate or TEs	9

Senior – 1st Semester		15
AC 401	Senior Design Project I P: AC301 & Senior or dept consent	3
	Elective Certificate or TEs	12

Senior – 2nd Semester		13
AC 402	Senior Design Project II P: AC401	3
	Elective Certificate or TEs	10

NOTES:

All first-time-in-college students must take WSUE 102A within their first two semesters.
Transfer students need take ENGR205 plus 1 extra TE credit hour, to replace WSUE102A and AC201
Students must fulfill the Engineer 2020 requirements.
Students selecting PSY 301 will need to ensure they have a total of 9 credit hours of 300 level or above general education classes.
Student complete at least three BS-AP Certificates
Student must take additional Technical Electives from and approved list to make a total or 120 credit hours
All engineering prerequisites need to be completed with C- or higher

Applied Computing Certificate Selections

Fall 2021 Schedule

Cybersecurity Essentials Certificate		
Senior – 1st Semester		
AC461	Digital Forensics *(fall only)* P: AC326	3
AC463	Cyber Risk Management *(fall only)* P: AC326	3
Senior – 2nd Semester		
AC462	Cyber Physical Systems *(spr only)* P: ENGR220, AC326	4
AC464	Web Application Security *(spr only)* P: AC324, AC326	3

Cyber-Physical Systems Certificate		
Junior – 1st Semester		
MATH242	Calculus I P: MATH123	5
Junior – 2nd Semester		
ENGT320	Circuits Technology *(spr only)* P: MATH 242 with "C-"	4
Senior – 1st Semester		
ENGT361	Industrial Controls & Instrumentation *(fall only)* P: ENGT 320 & MATH 243	4
Senior – 2nd Semester		
AC462	Cyber Physical Systems *(spr only)* P: ENGR220, AC326	4

Data and Web Security Certificate		
Junior – 1st Semester		
BDAM161,2,3	Business Software P/C: MATH111	3
Senior – 1st Semester		
AC463	Cyber Risk Management *(fall only)* P: AC326	3
MIS605	Systems Analysis & Design *(fall only)* P: junior standing	3
Senior – 2nd Semester		
AC464	Web Application Security *(spr only)* P: AC324, AC326	4
MIS696	Management of the IS Function *(spr only)* P/C: MIS605	3

Human Factors in Tech and Security Certificate		
Junior – 1st Semester		
PSY323	Social Psychology *(requied if not taken as Gen Ed)* P: PSY111	3
ENGT363	Human Threats to Cyber Security P: ENGT121	3
Junior – 2nd Semester		
PSY405	Human Factors Psychology P: PSY111	3
Senior – 1st Semester		
AC461	Digital Forensics *(fall only)* P: AC326	3
AC463	Cyber Risk Management *(fall only)* P: AC326	3

Applied Data Analysis Certificate		
Junior – 1st Semester		
MATH242	Calculus I P: MATH123	5
Junior – 2nd Semester		
MATH321	Discrete Structures I P: MATH242	3
Senior – 1st Semester		
ENGT441	Analysis of Decision Processes P: ECON201 or IME255	3
Senior – 2nd Semester		
ENGT572	Applied Machine learning P: A322	4

IT Fundamentals Certificate		
1st Semester		
AC222	Applied Computing and Networks 1 (spr only) P: MATH111	3
2nd Semester		
AC321	Applied Computing and Networks 2 (fall only) P: AC222	3
3rd Semester		
AC322	Applied Programing & Scripting (spr only) P: AC222	3

Pre-Requisites for Cyber Security Essentials		
1st Semester		
AC121	Cybersecurity Awareness	3
AC222	Applied Computing and Networks 1 P: MATH111	3
AC321	Applied Computing and Networks 2 (fall only) P: AC222	3
2nd Semester		
AC322	Applied Programing & Scripting (spr only) P: AC222	3
AC324	Applied Web Apps & DB Dev (spr only) P: AC222	3
ENGR220	Applied Analog and Digital Electronic (spr only) P: MATH111	3
3rd Semester		
AC326	Cyber Operations p: AC121, AC321 & AC322	4