

<i>(no stream)</i>			<i>Communication Networks</i>			<i>Intelligent Systems</i>			<i>Interactive Systems</i>			<i>Software Development</i>		
Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>
CSE1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>
CSE/MATH1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>
CSE1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>
CSE1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>
CSE2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>
CSE2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>
CSE2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>
CSE2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>
CSE3000	3	<input type="checkbox"/>	3000	3	<input type="checkbox"/>	3000	3	<input type="checkbox"/>	3000	3	<input type="checkbox"/>	3000	3	<input type="checkbox"/>
CSE3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>
CSE3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>
CSE3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>
CSE3401	3	<input type="checkbox"/>	3401	3	<input type="checkbox"/>	3401	3	<input type="checkbox"/>	3401	3	<input type="checkbox"/>	3401	3	<input type="checkbox"/>
CSE3xxx	3	<input type="checkbox"/>	3213 or 3214	3	<input type="checkbox"/>	3402	3	<input type="checkbox"/>	3461	3	<input type="checkbox"/>	3341	3	<input type="checkbox"/>
			3451	4	<input type="checkbox"/>				3431	3	<input type="checkbox"/>	3421	3	<input type="checkbox"/>
												3461	3	<input type="checkbox"/>
+CSE41xx	3	<input type="checkbox"/>	+CSE41xx	3	<input type="checkbox"/>	+CSE41xx	3	<input type="checkbox"/>	+CSE41xx	3	<input type="checkbox"/>	+CSE41xx	3	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	4084	6	<input type="checkbox"/>	4081	6	<input type="checkbox"/>	4082	6	<input type="checkbox"/>	4090	6	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	4215	3	<input type="checkbox"/>	4401 or 4402	3	<input type="checkbox"/>	2 of:			4312	3	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	4214	4	<input type="checkbox"/>	4421 or 4422	3	<input type="checkbox"/>	4431, 4441,			4313	3	<input type="checkbox"/>
CSE 3 or 4xxx	3	<input type="checkbox"/>				3 or 4xxx	3	<input type="checkbox"/>	4461, 4471	6	<input type="checkbox"/>			
CSE 3 or 4xxx	3	<input type="checkbox"/>												
<b>CSE total: 59</b>				<b>61</b>			<b>59</b>			<b>59</b>			<b>62</b>	
MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>
MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>
MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>
MATH1025	3	<input type="checkbox"/>	MATH1025	3	<input type="checkbox"/>	MATH1025	3	<input type="checkbox"/>	MATH1025	3	<input type="checkbox"/>	MATH1025	3	<input type="checkbox"/>
MATH2030	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>

**General Education courses for the BSc:**\*Gen Ed 12 \*\*Lab courses 6 **Additional courses to satisfy credit sub-totals for B.Sc. Specialised Honours:**non-CS, non-MATH 30 3xxx level and 4xxx level 42 SC credits 90 **Additional courses to satisfy 120 credit total for B.Sc. Specialised Honours:**120 

+ CSE/MATH4161 3.0 may not be used to satisfy this requirement.

\*Please obtain a list of acceptable General Education courses from the Science Academic Centre in room 355 Lumbers Building.

\*\* The Lab requirement must be fulfilled by taking 6 credits from the following: BIOL 1010 6.00; PHYS 1010 6.00; PHYS 1410 6.00; PHYS 1420 6.00; CHEM 1000 3.00 and CHEM 1001 3.00; or EATS 1010 3.00 and EATS 1011 3.00

(no stream)		Communication Networks		Intelligent Systems		Interactive Systems		Software Development	
Course	Cr. <input checked="" type="checkbox"/>	Course	Cr. <input checked="" type="checkbox"/>	Course	Cr. <input checked="" type="checkbox"/>	Course	Cr. <input checked="" type="checkbox"/>	Course	Cr. <input checked="" type="checkbox"/>
CSE1001	1 <input type="checkbox"/>	1001	1 <input type="checkbox"/>	1001	1 <input type="checkbox"/>	1001	1 <input type="checkbox"/>	1001	1 <input type="checkbox"/>
CSE/MATH1019	3 <input type="checkbox"/>	1019	3 <input type="checkbox"/>	1019	3 <input type="checkbox"/>	1019	3 <input type="checkbox"/>	1019	3 <input type="checkbox"/>
CSE1020	3 <input type="checkbox"/>	1020	3 <input type="checkbox"/>	1020	3 <input type="checkbox"/>	1020	3 <input type="checkbox"/>	1020	3 <input type="checkbox"/>
CSE1030	3 <input type="checkbox"/>	1030	3 <input type="checkbox"/>	1030	3 <input type="checkbox"/>	1030	3 <input type="checkbox"/>	1030	3 <input type="checkbox"/>
CSE2001	3 <input type="checkbox"/>	2001	3 <input type="checkbox"/>	2001	3 <input type="checkbox"/>	2001	3 <input type="checkbox"/>	2001	3 <input type="checkbox"/>
CSE2011	3 <input type="checkbox"/>	2011	3 <input type="checkbox"/>	2011	3 <input type="checkbox"/>	2011	3 <input type="checkbox"/>	2011	3 <input type="checkbox"/>
CSE2021	4 <input type="checkbox"/>	2021	4 <input type="checkbox"/>	2021	4 <input type="checkbox"/>	2021	4 <input type="checkbox"/>	2021	4 <input type="checkbox"/>
CSE2031	3 <input type="checkbox"/>	2031	3 <input type="checkbox"/>	2031	3 <input type="checkbox"/>	2031	3 <input type="checkbox"/>	2031	3 <input type="checkbox"/>
CSE3000	3 <input type="checkbox"/>	3000	3 <input type="checkbox"/>	3000	3 <input type="checkbox"/>	3000	3 <input type="checkbox"/>	3000	3 <input type="checkbox"/>
CSE3101	3 <input type="checkbox"/>	3101	3 <input type="checkbox"/>	3101	3 <input type="checkbox"/>	3101	3 <input type="checkbox"/>	3101	3 <input type="checkbox"/>
CSE3221	3 <input type="checkbox"/>	3221	3 <input type="checkbox"/>	3221	3 <input type="checkbox"/>	3221	3 <input type="checkbox"/>	3221	3 <input type="checkbox"/>
CSE3311	3 <input type="checkbox"/>	3311	3 <input type="checkbox"/>	3311	3 <input type="checkbox"/>	3311	3 <input type="checkbox"/>	3311	3 <input type="checkbox"/>
CSE3401	3 <input type="checkbox"/>	3401	3 <input type="checkbox"/>	3401	3 <input type="checkbox"/>	3401	3 <input type="checkbox"/>	3401	3 <input type="checkbox"/>
CSE3xxx	3 <input type="checkbox"/>	3213 or 3214	3 <input type="checkbox"/>	3402	3 <input type="checkbox"/>	3461	3 <input type="checkbox"/>	3341	3 <input type="checkbox"/>
		3451	4 <input type="checkbox"/>			3431	3 <input type="checkbox"/>	3421	3 <input type="checkbox"/>
								3461	3 <input type="checkbox"/>
+CSE41xx	3 <input type="checkbox"/>	+CSE41xx	3 <input type="checkbox"/>	+CSE41xx	3 <input type="checkbox"/>	+CSE41xx	3 <input type="checkbox"/>	+CSE41xx	3 <input type="checkbox"/>
CSE4xxx	3 <input type="checkbox"/>	4084	6 <input type="checkbox"/>	4081	6 <input type="checkbox"/>	4082	6 <input type="checkbox"/>	4090	6 <input type="checkbox"/>
CSE4xxx	3 <input type="checkbox"/>	4215	3 <input type="checkbox"/>	4401 or 4402	3 <input type="checkbox"/>	2 of:		4312	3 <input type="checkbox"/>
CSE4xxx	3 <input type="checkbox"/>	4214	4 <input type="checkbox"/>	4421 or 4422	3 <input type="checkbox"/>	4431, 4441,		4313	3 <input type="checkbox"/>
CSE 3 or 4xxx	3 <input type="checkbox"/>			3 or 4xxx	3 <input type="checkbox"/>	4461, 4471	6 <input type="checkbox"/>		
CSE 3 or 4xxx	3 <input type="checkbox"/>								
<b>CSE total: 59</b>		<b>61</b>		<b>59</b>		<b>59</b>		<b>62</b>	
MATH1090	3 <input type="checkbox"/>	MATH1090	3 <input type="checkbox"/>	MATH1090	3 <input type="checkbox"/>	MATH1090	3 <input type="checkbox"/>	MATH1090	3 <input type="checkbox"/>
MATH1300	3 <input type="checkbox"/>	MATH1300	3 <input type="checkbox"/>	MATH1300	3 <input type="checkbox"/>	MATH1300	3 <input type="checkbox"/>	MATH1300	3 <input type="checkbox"/>
MATH1310	3 <input type="checkbox"/>	MATH1310	3 <input type="checkbox"/>	MATH1310	3 <input type="checkbox"/>	MATH1310	3 <input type="checkbox"/>	MATH1310	3 <input type="checkbox"/>
MATH1025	3 <input type="checkbox"/>	MATH1025	3 <input type="checkbox"/>	MATH1025	3 <input type="checkbox"/>	MATH1025	3 <input type="checkbox"/>	MATH1025	3 <input type="checkbox"/>
MATH2030	3 <input type="checkbox"/>	MATH2030	3 <input type="checkbox"/>	MATH2030	3 <input type="checkbox"/>	MATH2030	3 <input type="checkbox"/>	MATH2030	3 <input type="checkbox"/>

**General Education courses for the BA:**

24 credits of **General Education** chosen from approved **Humanities, Modes of Reasoning, Natural Science and Social Science** courses at the 1000 and/or 2000-level, including a **minimum of six credits in each of Humanities, Natural Science and Social Science. A maximum of 9 credits in each of the four areas** (Humanities, Modes of Reasoning, Natural Science and Social Science) will count towards fulfillment of General Education requirements.

- SOSC
- HUMA
- MODES
- NATS

**Electives:** Courses outside major and other requirements 18

**Additional courses to satisfy credit sub-totals for the BA:**

- non-CS, non-MATH 30
- 4000-level 18
- 3000+4000 level 36

**Additional courses to satisfy 120 credit total:** 120




+ CSE/MATH4161 3.0 may not be used to satisfy this requirement.

# International Dual Degree BSc Specialised Honours

# 2011-12 Checklist

Course	Cr.	<input checked="" type="checkbox"/>
CSE1001	1	<input type="checkbox"/>
CSE/MATH1019	3	<input type="checkbox"/>
CSE1020	3	<input type="checkbox"/>
CSE1030	3	<input type="checkbox"/>
CSE2001	3	<input type="checkbox"/>
CSE2011	3	<input type="checkbox"/>
CSE2021	4	<input type="checkbox"/>
CSE2031	3	<input type="checkbox"/>
German lang/culture	6	<input type="checkbox"/>
Greek lang/culture	6	<input type="checkbox"/>
CSE3000	3	<input type="checkbox"/>
CSE3101	3	<input type="checkbox"/>
CSE3221	3	<input type="checkbox"/>
CSE3311	3	<input type="checkbox"/>
CSE3401	3	<input type="checkbox"/>
CSE3421	3	<input type="checkbox"/>
+CSE41xx	3	<input type="checkbox"/>
CSE408x 6.0 (Undergrad Thesis)	6	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>
CSE 3 or 4xxx	3	<input type="checkbox"/>
CSE 3 or 4xxx	3	<input type="checkbox"/>
<b>CSE total:</b>	<b>59</b>	
MATH1090	3	<input type="checkbox"/>
MATH1300	3	<input type="checkbox"/>
MATH1310	3	<input type="checkbox"/>
MATH1025	3	<input type="checkbox"/>
MATH2030	3	<input type="checkbox"/>

### Courses typically completed at

	means	York U
	means	BRSU (Fall)
	means	U of C (Winter)

### General Education courses for the BSc:

Gen Ed	18	<input type="checkbox"/>	Includes the language courses
**Lab courses	6	<input type="checkbox"/>	

### Additional courses to satisfy credit sub-totals for B.Sc. Specialised Honours:

non-CS, non-MATH	30	<input type="checkbox"/>
3xxx level and 4xxx level	42	<input type="checkbox"/>
SC credits	90	<input type="checkbox"/>

### Additional courses to satisfy 120 credit total for B.Sc. Specialised Honours:

120

+ CSE/MATH4161 3.0 may not be used to satisfy this requirement.

\*\* The Lab requirement must be fulfilled by taking 6 credits from the following:

BIOL 1010 6.00; PHYS 1010 6.00; PHYS 1410 6.00; PHYS 1420 6.00;

CHEM 1000 3.00 and CHEM 1001 3.00; or EATS 1010 3.00 and EATS 1011 3.00

**Faculty of Science & Engineering**

<b>BSc Degree</b>			<b>BA Degree</b>		
Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>
CSE1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>
CSE/MATH1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>
CSE1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>
CSE1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>
CSE2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>
CSE2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>
CSE2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>
CSE2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>
<b>CSE2041</b>	<b>4</b>	<input type="checkbox"/>	<b>2041</b>	<b>4</b>	<input type="checkbox"/>
CSE3000	3	<input type="checkbox"/>	3000	3	<input type="checkbox"/>
CSE3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>
CSE3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>
CSE3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>
CSE3213	3	<input type="checkbox"/>	3213	3	<input type="checkbox"/>
CSE3214	3	<input type="checkbox"/>	3214	3	<input type="checkbox"/>
CSE3421	3	<input type="checkbox"/>	3421	3	<input type="checkbox"/>
CSE3481	3	<input type="checkbox"/>	3481	3	<input type="checkbox"/>
<b>CSE4480</b>	<b>3</b>	<input type="checkbox"/>	<b>4480</b>	<b>3</b>	<input type="checkbox"/>
CSE4413	3	<input type="checkbox"/>	4413	3	<input type="checkbox"/>
CSE4481	4	<input type="checkbox"/>	4481	4	<input type="checkbox"/>
CSE4482	3	<input type="checkbox"/>	4482	3	<input type="checkbox"/>
<b>CSE total: 64</b>			<b>64</b>		
MATH1025	3	<input type="checkbox"/>	MATH1025	3	<input type="checkbox"/>
MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>
MATH1131	3	<input type="checkbox"/>	MATH1131	3	<input type="checkbox"/>
MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>
MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>
MATH2030	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>
*PHIL2075 or STS3500	3	<input type="checkbox"/>	PHIL2075 or STS3500	3	<input type="checkbox"/>
<b>General Education</b>			<b>General Education</b>		
*+Gen Ed	12	<input type="checkbox"/>			
**Lab courses	6	<input type="checkbox"/>	See Honours BA Degree	24	<input type="checkbox"/>
<b>Additional courses to satisfy credit sub-totals:</b>					
non-CS, non-MATH	30	<input type="checkbox"/>	non-CS, non-MATH	30	<input type="checkbox"/>
3000- and 4000-level	42	<input type="checkbox"/>	4000-level	18	<input type="checkbox"/>
SC credits	90	<input type="checkbox"/>			
<b>Total Credits: 120</b>		<input type="checkbox"/>	<b>120</b>		<input type="checkbox"/>

Red means "New in 2011/12"

\* Please obtain a list of acceptable FSE General Education courses from Science Academic Services, rm. 355 Lumbers Building. If PHIL2075 is taken 9 credits more are required to satisfy the general education requirement.

+ SOSC2312 9.0 or SOSC2340 9.0 are highly recommended.

\*\* The Lab requirement must be fulfilled by taking 6 credits from the following: BIOL 1010 6.00; PHYS 1010 6.00; PHYS 1410 6.00; PHYS 1420 6.00; CHEM 1000 3.00 and CHEM 1001 3.00; or EATS 1010 3.00 and EATS 1011 3.00

**Specialized Honours BA in Digital Media  
Suggested Degree Progression and Checklist §  
2011-2012**

v. 2011-04-20

	F A L L T E R M	W I N T E R T E R M	
Year 1	CSE 1710 3.0	CSE 1720 3.0	6.0
	3.0 cr from Yr1-FFA Group	3.0 cr from Yr1-FFA Group	6.0
	FACS 2930 6.0		6.0
	9.0 cr from Yr1-COMN Group		9.0
	Fall OR Winter Term: MATH 1190 3.0 or 3.0 cr Elective if MHF4U completed		3.0
Year 2	CSE 1030 3.0	CSE 2011 3.0	30.0
	CSE/MATH 1019 3.0	CSE 2031 3.0	6.0
	FACS 2935 3.0	FACS 2936 3.0	6.0
	MATH 1131 3.0 OR MATH 2565 3.0	MATH 1025 3.0	6.0
	3.0 cr Elective	3.0 cr from Yr2/3-FFA Group	6.0
Year 3	3.0 cr from Yr3-CSE Group †	3.0 cr from Yr3-CSE Group	30.0
	3.0 cr from Yr2/3-FFA Group †	3.0 cr from Yr2/3-FFA Group	6.0
	FACS 3936 3.0 †	3.0 cr from Yr3-CSE Group	6.0
	FSE students: 9.0 cr toward Gen Ed requirements †; FFA students 9.0 cr Elective (VISA 3054 6.0 recommended)		9.0
	Fall OR Winter Term: 3.0 cr Elective		3.0
Year 4	3.0 cr from Yr4-CSE Group	3.0 cr from Yr4-CSE Group	30.0
	3.0 cr from Yr4-FFA Group	3.0 cr from Yr4-FFA Group	6.0
	6.0 cr from Yr3/4-COMN Group		6.0
	CSE 4700 6.0		6.0
	6.0 cr toward Gen Ed requirements †		6.0

**† Faculty-specific General Education requirements**

**FSE students:**

- 6.0 credits in NATS and 9.0 credits in HUMA.
- Alternatively, 6.0 credits in each of NATS, HUMA, and MODR. (This avenue requires 3 additional credits).

**FFA students:**

- at least 6.0 credits chosen from: NATS, BIOL, CHEM, SC/STS, EATS, PHAS, ENVS1500 6.0.

§ Pre-requisites not shown here; please check course descriptions and/or see an academic advisor.

‡ Additional specialized planning required for these courses; please see an academic advisor.

◇ Indicates courses that are required to be eligible for the Technology Internship Program (TIP). A cumulative GPA of 6.0 (B) or better in the program's core courses is also required. Students must have at least 18 credits remaining in their degree. See a TIP advisor for further info.

6.0 credits chosen from Yr1-FFA Group:  
DANC 1900 3.0, FILM 1900 3.0, MUSI 1900 3.0, THEA 1900 3.0,  
VISA 1900 3.0, YSDN 1900 3.0,  
FACS 1900 6.0 (not avail after 2011-12)

9.0 credits chosen from Yr1-COMN Group:  
COMN 1310 9.0  
SOSC 1731 9.0

6.0 credits chosen from Yr2/3-FFA Group:  
FACS 2500 3.0, FACS 3930 3.0, FACS 3931 3.0,  
FACS 3933 3.0, FACS 3935 3.0, FACS 3938 3.0, VISA 2057 3.0

6.0 credits chosen from Yr3-CSE Group:  
(either CSE 2041 4.0 or CSE 3214 3.0), CSE 3421 3.0,  
CSE 3431 3.0, CSE 3461 3.0

6.0 credits chosen from Yr4-FFA Group:  
FACS 4930 3.0, FACS 4931 3.0, FACS 4932 3.0,  
FACS 4933 3.0, FACS 4935 3.0

6.0 credits chosen from Yr4-CSE Group:  
CSE 4413 3.0, CSE 4431 3.0 ‡, CSE 4441 3.0, CSE 4461 3.0,  
CSE 4471 3.0 ‡, CSE 4491 3.0 ‡

6.0 credits chosen from Yr3/4-COMN Group:  
COMN 3313 3.00, COMN 3315 6.00, COMN 3316 6.00, COMN 3317 3.00, COMN 3318 6.00, COMN 3352 3.00,  
COMN 3393 6.00, COMN 4300 6.00, COMN 4301 6.00, COMN 4302 6.00, COMN 4305 6.00, COMN 4306 6.00,  
COMN 4307 6.00, COMN 4319 6.00, COMN 4320 6.00, COMN 4330 6.00, COMN 4801 6.00

120.0

<i>(no stream)</i>			<b>Communication Networks</b>		<b>Intelligent Systems</b>		<b>Interactive Systems</b>	
Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>
CSE1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>
CSE/MATH1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>
CSE1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>
CSE1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>
CSE2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>
CSE2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>
CSE2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>
CSE2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>
CSE3000	3	<input type="checkbox"/>	3000	3	<input type="checkbox"/>	3000	3	<input type="checkbox"/>
CSE3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>
CSE3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>
CSE3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>
CSE3401	3	<input type="checkbox"/>	3401	3	<input type="checkbox"/>	3401	3	<input type="checkbox"/>
			3213 or 3214	3	<input type="checkbox"/>	3402	3	<input type="checkbox"/>
			3451	4	<input type="checkbox"/>			<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	4084	6	<input type="checkbox"/>	4081	6	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>						
CSE4xxx	3	<input type="checkbox"/>	4214	4	<input type="checkbox"/>	4401 or 4402	3	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	4215	3	<input type="checkbox"/>	4421 or 4422	3	<input type="checkbox"/>
<b>CSE total: 50</b>				<b>58</b>			<b>53</b>	
								<b>56</b>
MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>
MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>
MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>
MATH2030	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>

**General Education courses for Faculty of Science and Engineering:**

- \*Gen Ed 12
- \*\*Lab courses 6

**Additional courses to satisfy credit sub-totals for B.Sc. Honours:**

- non-CS, non-MATH 30
- 3xxx level and 4xxx level 42
- \*\*\*SC credits 90

**Additional courses to satisfy 120 credit total for B.Sc. Honours:**

120

\* Obtain a list of acceptable General Education courses from Science Academic Services, rm. 355 Lumbers.

\*\* The Lab requirement must be fulfilled by taking 6 credits from the following: BIOL 1010 6.00; PHYS 1010 6.00; PHYS 1410 6.00; PHYS 1420 6.00; CHEM 1000 3.00 and CHEM 1001 3.00; or EATS 1010 3.00 and EATS 1011 3.00

\*\*\* A linear algebra course such as MATH1025 3.00 is highly recommended.

<i>(no stream)</i>			<b>Communication Networks</b>		<b>Intelligent Systems</b>		<b>Interactive Systems</b>	
Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>
CSE1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>
CSE/MATH1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>
CSE1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>
CSE1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>
CSE2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>
CSE2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>
CSE2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>
CSE2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>
CSE3000	3	<input type="checkbox"/>	3000	3	<input type="checkbox"/>	3000	3	<input type="checkbox"/>
CSE3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>
CSE3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>
CSE3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>
CSE3401	3	<input type="checkbox"/>	3401	3	<input type="checkbox"/>	3401	3	<input type="checkbox"/>
			3213 or 3214	3	<input type="checkbox"/>	3402	3	<input type="checkbox"/>
			3451	4	<input type="checkbox"/>			
CSE4xxx	3	<input type="checkbox"/>						
CSE4xxx	3	<input type="checkbox"/>	4084	6	<input type="checkbox"/>	4081	6	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	4214	4	<input type="checkbox"/>	4401 or 4402	3	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	4215	3	<input type="checkbox"/>	4421 or 4422	3	<input type="checkbox"/>
<b>CSE total: 50</b>				<b>58</b>			<b>53</b>	
								<b>56</b>
MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>
MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>
MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>
MATH2030	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>

24 credits of **General Education** chosen from approved **Humanities, Modes of Reasoning, Natural Science and Social Science** courses at the 1000 and/or 2000-level, including a **minimum of six credits in each of Humanities, Natural Science and Social Science**. A **maximum of 9 credits in each of the four areas** (Humanities, Modes of Reasoning, Natural Science and Social Science) will count towards fulfillment of General Education requirements.

SOSC   
 HUMA   
 MODES   
 NATS

**Electives:** Courses outside major and other requirements 18

**Additional Requirements for the Honours BA:**  
 non-CS, non-MATH 30   
 4000-level 18   
 3000+4000 level 36

**Additional courses to satisfy 120 credit total:** 120

\* A linear algebra course such as MATH1025 3.00 is highly recommended.

International Honours Bachelors Degrees (iBSc, iBA)

2011-12 Checklist

**Faculty of Sc. & Eng.**

<i>iBSc Degree</i>			<i>iBA Degree</i>		
Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>
CSE1001	1	<input type="checkbox"/>	CSE1001	1	<input type="checkbox"/>
CSE/MATH1019	3	<input type="checkbox"/>	CSE/MATH1019	3	<input type="checkbox"/>
CSE1020	3	<input type="checkbox"/>	CSE1020	3	<input type="checkbox"/>
CSE1030	3	<input type="checkbox"/>	CSE1030	3	<input type="checkbox"/>
CSE2001	3	<input type="checkbox"/>	CSE2001	3	<input type="checkbox"/>
CSE2011	3	<input type="checkbox"/>	CSE2011	3	<input type="checkbox"/>
CSE2021	4	<input type="checkbox"/>	CSE2021	4	<input type="checkbox"/>
CSE2031	3	<input type="checkbox"/>	CSE2031	3	<input type="checkbox"/>
CSE3000	3	<input type="checkbox"/>	CSE3000	3	<input type="checkbox"/>
CSE3101	3	<input type="checkbox"/>	CSE3101	3	<input type="checkbox"/>
CSE3221	3	<input type="checkbox"/>	CSE3221	3	<input type="checkbox"/>
CSE3311	3	<input type="checkbox"/>	CSE3311	3	<input type="checkbox"/>
CSE3401	3	<input type="checkbox"/>	CSE3401	3	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	CSE4xxx	3	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	CSE4xxx	3	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	CSE4xxx	3	<input type="checkbox"/>
CSE4xxx	3	<input type="checkbox"/>	CSE4xxx	3	<input type="checkbox"/>
<b>CSE total:</b>	<b>50</b>			<b>50</b>	
MATH1025	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>
MATH1090	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>
MATH1300	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>
MATH1310	3	<input type="checkbox"/>	MATH2030	3	<input type="checkbox"/>
MATH2030	3	<input type="checkbox"/>			
<b>International Component</b>			<b>International Component</b>		
language courses	12 to 18	<input type="checkbox"/>	language courses	18	<input type="checkbox"/>
international studies	18 to 12	<input type="checkbox"/>	international studies	12	<input type="checkbox"/>
exchange term			exchange term		
<b>*Gen Ed</b>	12	<input type="checkbox"/>	<b>General Education</b>		
**Lab courses	6	<input type="checkbox"/>	<b>24 credits; See Honours BA.</b>	24	<input type="checkbox"/>

Red means "New in 2011/12"

**Credit Totals (120), Upper Level and Other Requirements: See the BA or BSc Honours degrees**

\* Obtain a list of acceptable General Education courses from Science Academic Services, rm. 355 Lumbers.  
May be satisfied by international studies courses.

\*\* The Lab requirement must be fulfilled by taking 6 credits from the following: BIOL 1010 6.00; PHYS 1010 6.00; PHYS 1410 6.00; PHYS 1420 6.00; CHEM 1000 3.00 and CHEM 1001 3.00; or EATS 1010 3.00 and EATS 1011 3.00



## Faculty: Science and Engineering

### CSE Minor (BSc, BA). Must be paired with an honours major for a total of 120 2011-12 Checklist

<b>B.Sc. Degree</b>			<b>B.A. Degree</b>		
<b>Course</b>	<b>Cr.</b>		<b>Course</b>	<b>Cr.</b>	
CSE/MATH 1019	3	<input type="checkbox"/>	CSE/MATH 1019	3	<input type="checkbox"/>
CSE1710	3	<input type="checkbox"/>	CSE1710	3	<input type="checkbox"/>
CSE1720	3	<input type="checkbox"/>	CSE1720	3	<input type="checkbox"/>
CSE1030	3	<input type="checkbox"/>	CSE1030	3	<input type="checkbox"/>
CSE2011	3	<input type="checkbox"/>	CSE2011	3	<input type="checkbox"/>
At least 15 CSE credits with 2nd digit not 5; nine credits must be CSE3xxx or CSE4xxx	15	<input type="checkbox"/>	At least 15 CSE credits with 2nd digit not 5; nine credits must be CSE3xxx or CSE4xxx	15	<input type="checkbox"/>
<b>CSE total:</b>	<b>30</b>	<input type="checkbox"/>	<b>30</b>	<input type="checkbox"/>	
<b>General Education *</b>	12	See Honours BSc checklist	<b>General Education</b>	24	See Honours BA checklist
**Lab courses	6	See Honours BSc checklist			
Additional courses to satisfy credit sub- totals for a B.Sc. Honours:			Additional courses to satisfy credit sub- totals for a BA Honours:		

\*Please obtain a list of acceptable General Education courses from the Science Academic Centre in room 355 Lumbers Building.

\*\* The Lab requirement must be fulfilled by taking 6 credits from the following: BIOL 1010 6.00; PHYS 1010 6.00; PHYS 1410 6.00; PHYS 1420 6.00; CHEM 1000 3.00 and CHEM 1001 3.00; or EATS 1010 3.00 and EATS 1011 3.00

**Note:** SC/CSE 1020 3.00 can be substituted for the pair SC/CSE1710 3.00 and SC/CSE1720 3.00 toward satisfying the minor requirements as long as the credit count for the minor remains 30 minimum

**Faculty of Science & Engineering**

<b>B.Sc. Degree</b>			<b>B.A. Degree</b>		
Course	Cr.	<input checked="" type="checkbox"/>	Course	Cr.	<input checked="" type="checkbox"/>
CSE1001	1	<input type="checkbox"/>	1001	1	<input type="checkbox"/>
CSE/MATH1019	3	<input type="checkbox"/>	1019	3	<input type="checkbox"/>
CSE1020	3	<input type="checkbox"/>	1020	3	<input type="checkbox"/>
CSE1030	3	<input type="checkbox"/>	1030	3	<input type="checkbox"/>
CSE2001	3	<input type="checkbox"/>	2001	3	<input type="checkbox"/>
CSE2011	3	<input type="checkbox"/>	2011	3	<input type="checkbox"/>
CSE2021	4	<input type="checkbox"/>	2021	4	<input type="checkbox"/>
CSE2031	3	<input type="checkbox"/>	2031	3	<input type="checkbox"/>
CSE3101	3	<input type="checkbox"/>	3101	3	<input type="checkbox"/>
CSE3221	3	<input type="checkbox"/>	3221	3	<input type="checkbox"/>
CSE3311	3	<input type="checkbox"/>	3311	3	<input type="checkbox"/>
CSE34xx	3	<input type="checkbox"/>	34xx	3	<input type="checkbox"/>
CSE3xxx	3	<input type="checkbox"/>	3xxx	3	<input type="checkbox"/>
CSE3xxx	3	<input type="checkbox"/>	3xxx	3	<input type="checkbox"/>
<b>CSE total:</b>	<b>41</b>		<b>CSE total:</b>	<b>41</b>	
MATH1090	3	<input type="checkbox"/>	MATH1090	3	<input type="checkbox"/>
MATH1300	3	<input type="checkbox"/>	MATH1300	3	<input type="checkbox"/>
MATH1310	3	<input type="checkbox"/>	MATH1310	3	<input type="checkbox"/>
<b>General Education</b>			<b>General Education</b>		
*Gen Ed	12	<input type="checkbox"/>	24 credits of <b>General Education</b> chosen from approved <b>Humanities, Modes of Reasoning, Natural Science and Social Science</b> courses at the 1000 and/or 2000-level, including a <b>minimum of six credits in each of Humanities, Natural Science and Social Science. A maximum of 9 credits in each of the four areas</b> (Humanities, Modes of Reasoning, Natural Science and Social Science) will count towards fulfillment of General Education requirements.		
**Lab courses	6	<input type="checkbox"/>			
Electives (outside CSE and not otherwise required)			18		<input type="checkbox"/>
SC credits:	66	<input type="checkbox"/>			
<b>Total Credits:</b>	<b>90</b>	<input type="checkbox"/>	<b>90</b>		<input type="checkbox"/>

- SOSC
- HUMA
- MODES
- NATS

\* Obtain a list of acceptable FSE General Education courses from the Science Academic Centre in rm 355 Lumbers Building.  
 \*\* The Lab requirement must be fulfilled by taking 6 credits from the following: BIOL 1010 6.00; PHYS 1010 6.00; PHYS 1410 6.00; PHYS 1420 6.00; CHEM 1000 3.00 and CHEM 1001 3.00; or EATS 1010 3.00 and EATS 1011 3.00

## Engineering

The School of Engineering within the Faculty of Science and Engineering offers an Honours bachelor of applied science (BASc Honours) degree in engineering. After completion of a common first-year program, students will choose one of four available programs: computer engineering, geomatics engineering, software engineering or space engineering.

i) All BASc Honours degree candidates must complete the engineering program core: [SC/CHEM 1000 3.00](#); [SC/CSE 1020 3.00](#); [SC/CSE 1030 3.00](#); [SC/EATS 1010 3.00](#); [SC/ENG 1000 6.00](#); [SC/ENG 1001 1.00](#); [SC/ENG 2001 3.00](#); [SC/ENG 2002 3.00](#); [SC/ENG 3000 3.00](#); [SC/ENG 4000 6.00](#); [ES/ENVS 2150 3.00](#); [SC/MATH 1013 3.00](#); [SC/MATH 1014 3.00](#); [SC/MATH 1019 3.00](#); [SC/MATH 1025 3.00](#); [SC/MATH 2015 3.00](#); [SC/PHYS 1010 6.00](#); [SC/PHYS 2020 3.00](#);

ii) All BASc Honours degree candidates must complete 12 non-science general education credits (refer to General Education Requirements in the Faculty of Science and Engineering Regulations Governing Undergraduate Degree Requirements section).

iii) All BASc Honours degree candidates, in accordance with their declared stream, must satisfy the academic standing and course requirements below.

To graduate in the BASc Honours program requires successful completion of all Faculty requirements and program and stream required courses and a minimum cumulative credit-weighted grade point average of 5.00 (C+) over all courses completed.

### Computer Engineering Stream

- The engineering program core;
- [SC/CSE 2001 3.00](#); [SC/CSE 2011 3.00](#); [SC/CSE 2021 4.00](#); [SC/CSE 2031 3.00](#);
- [SC/MATH 1090 3.00](#); [SC/MATH 2030 3.00](#);
- at least six additional credits from [SC/BIOL 1000 3.00](#), [SC/BIOL 1001 3.00](#) (or [SC/BIOL 1010 6.00](#)), [SC/CHEM 1001 3.00](#), [SC/CHEM 2011 3.00](#), [SC/EATS 1011 3.00](#), [SC/PHYS 1070 3.00](#), [SC/PHYS 2010 3.00](#), [SC/PHYS 2040 3.00](#), [SC/PHYS 2060 3.00](#);
- [SC/ENG 2200 3.00](#); [SC/ENG 2210 3.00](#);
- [SC/CSE 3101 3.00](#); [SC/CSE 3201 4.00](#); [SC/CSE 3213 3.00](#); [SC/CSE 3215 4.00](#); [SC/CSE 3221 3.00](#); [SC/CSE 3311 3.00](#); [SC/CSE 3451 4.00](#);
- three additional credits from computer science courses at the 3000 or 4000 level;
- [SC/PHYS 2211 1.00](#);
- [SC/CSE 4201 3.00](#); [SC/CSE 4214 4.00](#); [SC/CSE 4312 3.00](#);
- 12 credits from: [SC/CSE 3214 3.00](#), [SC/CSE 3431 3.00](#), [SC/CSE 4210 3.00](#)<sup>1</sup>, [SC/CSE 4211 3.00](#), [SC/CSE 4215 3.00](#)<sup>1</sup>, [SC/CSE 4313 3.00](#), [SC/CSE 4352 3.00](#)<sup>1</sup>, [SC/CSE 4421 3.00](#)<sup>1</sup>, [SC/CSE 4422 3.00](#)<sup>1</sup>, [SC/CSE 4431 3.00](#)<sup>1</sup>, [SC/CSE 4441 3.00](#), [SC/CSE 4452 3.00](#)<sup>1</sup>, [SC/CSE 4471 3.00](#)<sup>1</sup>, [SC/ENG 3320 3.00](#), [SC/ENG 4550 3.00](#).

1. These twelve credits must include at least two courses with significant laboratory experience.

<b>First Year (common with other engineering streams offered at York)</b>	
CHEM 1000 3.0	Chemical Structure
CSE 1020 3.0	Introduction to Computer Science I
CSE 1030 3.0	Introduction to Computer Science II
EATS 1010 3.0	The Dynamic Earth & Space Geodesy
ENG 1000 6.0	Introduction to Engineering Design
MATH 1013 3.0	Applied Calculus I
MATH 1014 3.0	Applied Calculus II
MATH 1019 3.0	Discrete Mathematics for Computer Science
MATH 1025 3.0	Applied Linear Algebra
PHYS 1010 6.0	Physics
ENG 1001 1.0	Introduction to Technical Writing
<b>Second Year (differs from the CE program in only one course, allowing maximum flexibility in choosing between the various engineering programs at York)</b>	
CSE 2001 3.0	Introduction to Theory of Computation
CSE 2011 3.0	Data Structures
CSE 2021 4.0	Computer Organization
CSE 2031 3.0	Software Tools
CSE 2311 3.0	Software Development Project
ENG 2001 3.0	Engineering Projects: Management, Economics & Safety
ENG 2002 3.0	Mechanical and Materials Engineering
MATH 1090 3.0	Introduction to Logic for Computer Science
MATH 2015 3.0	Applied Multivariate and Vector Calculus
MATH 2030 3.0	Elementary Probability
PHYS 2020 3.0	Electricity and Magnetism
PHYS 2211 1.0	Experimental Electromagnetism
PHYS 3050 3.0	Electronics I
<b>Third Year</b>	
CSE 3101 3.0	Design and Analysis of Algorithms
CSE 3201 4.0	Logic Design
CSE 3215 4.0	Microcomputers and Embedded Systems
CSE 3221 3.0	Operating System Fundamentals
CSE 3311 3.0	Software Design
CSE 3451 4.0	Signals and Systems
CSE 3342 3.0	System Specification and Refinement
ENG 3000 3.0	Professional Engineering Practice
ENVS 2150 3.0	Environment, Technology and Sustainable Society
6 credits General Education (a writing course such as AP/EN 2720 6.0 is recommended)	
<b>Note:</b> At least 3 credits of CSE elective courses (see end of 4 <sup>th</sup> year) are recommended to be taken in the third year of study	

<b>Note:</b> Between 3rd and 4th year, an optional, non-credit, 4-16 months long internship program where students will gain professional experience is available. Students are required to enroll in ENG3900 0.0 (Engineering Internship Term) in each term of their internship.	
<b>Fourth Year</b>	
ENG 4000 6.0	Engineering Project
CSE 4312 3.0	Software Engineering Requirements
CSE 4313 3.0	Software Engineering Testing
CSE 4413 3.0	E-Commerce Systems
CSE 4314 3.0	Advanced Software Engineering
CSE 4315 3.0	Mission-Critical Systems
ENG 4550 3.0	Introduction to Control Systems
6 credits General Education (must satisfy CEAB Complementary Studies requirements)	
12 credits from CSE courses at the 3000 and 4000 level At least 6 of these credits must be from the following list:	
CSE 3214 3.0	Computer Network Protocols and Applications
CSE 4214 3.0	Digital Communications
CSE 4215 3.0	Mobile Communications
CSE 3421 3.0	Introduction to Database Systems
CSE 4411 3.0	Database Management Systems
CSE 4412 3.0	Data Mining
CSE 3461 3.0	User Interfaces
CSE 4441 3.0	Human Computer Interaction