Orientation Information for the B.Sc. Major in Software Engineering ($\neq$ B.Sc. Major in Computer Science)

- The Major in Software Engineering is a recently introduced program. It was offered for the first time in the 2002-2003 academic year.
- It is only open to students starting their major program this year or continuing in the Major in SW Engineering program from U1 to U2.
- CS (major/honours) students in U1 or U2 can transfer to the SW Engineering program if and only if they have taken at least all the courses listed in the SW Engineering Study Schedule for that point of the curriculum. Transfer needs to be approved by an advisor.
- CS students in U3 cannot transfer into the SW Engineering program.
- Software Engineering major students can transfer to the CS major program if approved by an advisor.

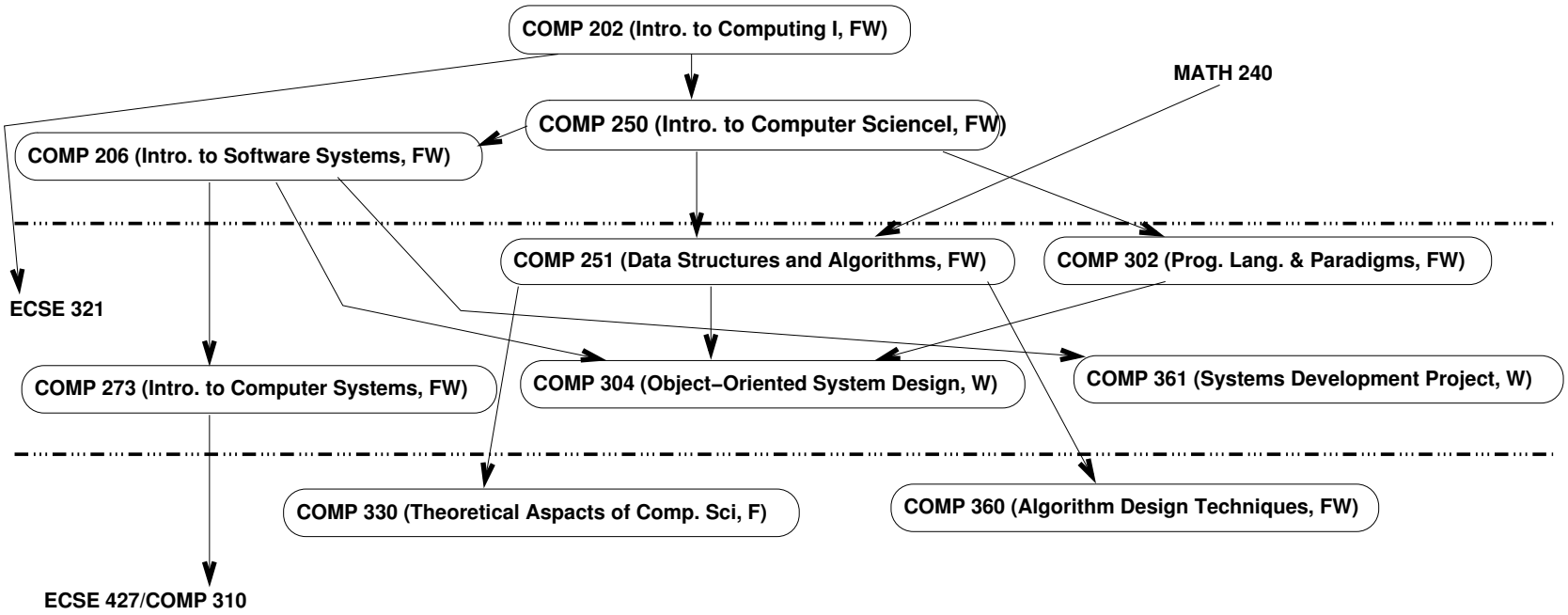
What is the Software Engineering Major?

- program emphasizing software development and engineering,
- combines courses from Computer Science, Computer Engineering and Mathematics,
- contains many of the required courses of the Computer Science major,
- but also includes a variety of required courses devoted to requirement design, software design, implementation and verification.

Summary of the Program

- 90 credit B.Sc. degree
  - 69 credits are part of the major,
  - 21 credits are electives.
- 69 credits for the major are:
  - 30 required credits from Computer Science (COMP) (10 courses)
  - 15 required credits from Computer Engineering (ECSE) (5 courses)
  - 15 required credits from Mathematics (MATH) (5 courses)
  - 9 or more credits from a list of complementary courses (from a list containing selected COMP, ECSE and MATH courses).

B.Sc. Major in Software Engineering – Required Computer Science Courses (10 courses, 30 credits)



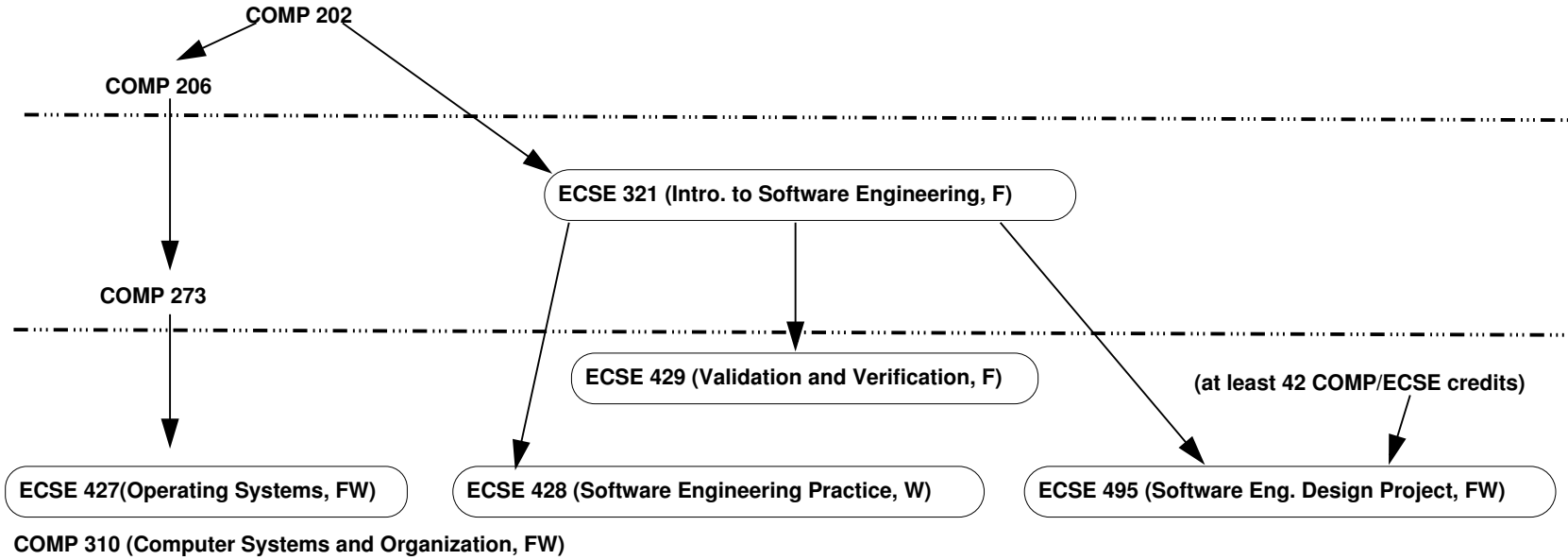
NOTES:

F – Fall Term, W – Winter Term, FW – both Fall and Winter Terms

→ Denotes a prerequisite - - - → Denotes a corequisite

All COMP courses are listed in the Faculty of Science Calendar.

B.Sc. Major in Software Engineering – Required Computer Engineering Courses (5 courses, 15 credits)



NOTES:

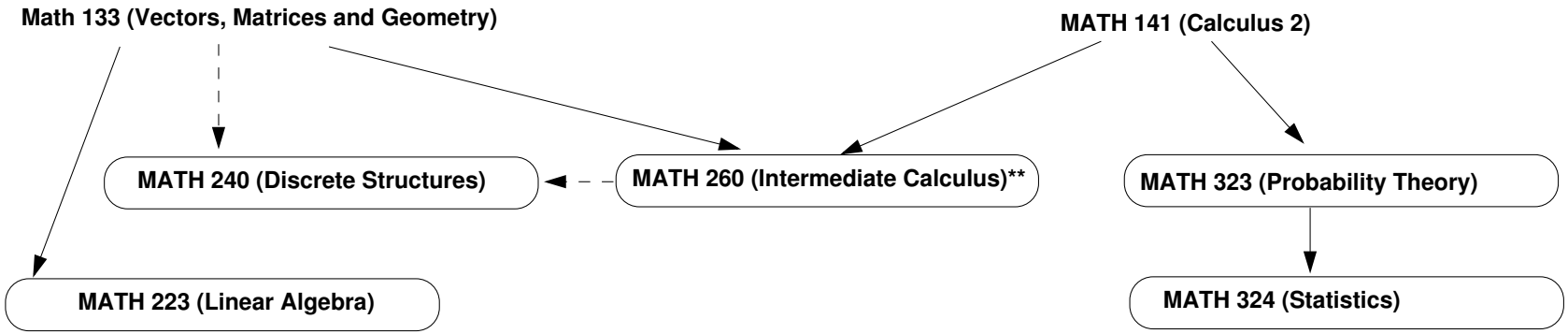
F – Fall Term, W – Winter Term, FW – both Fall and Winter Terms

→ Denotes a prerequisite - - - - - - → Denotes a corequisite

All ECSE courses are listed in the Faculty of Engineering Calendar.

ECSE 427 and COMP 310 are IDENTICAL.

B.Sc. Major in Software Engineering – Required Math Courses (5 courses, 15 credits)



NOTES:

MATH 141 and MATH 133 (or equivalents) should have been completed before starting the Software Engineering Program.

→ Denotes a prerequisite

- - - → Denotes a corequisite

** MATH 260 is listed in Section 6 of the Faculty of Engineering Calendar. All other MATH courses are listed in the Faculty of Science Calendar.

Approved First Year Program - starting at COMP 202

Fall:
1. COMP 202 - Intro. to Computing I (CEGEP math)
2. MATH 240 - Discrete Structures (MATH 133 and 260, coreq.)
3. MATH 260 - Intermediate Calculus (MATH 141)
4. MATH 323 - Probability Theory (MATH 141)
5. elective

Winter:
1. COMP 250 - Intro. to Comp. Sci. (COMP 202 or equiv.)
2. COMP 206 - Intro. to Software Systems (COMP 202)
3. MATH 223 - Linear Algebra (MATH 133)
4. MATH 324 - Statistics (MATH 323)
5. elective

Should I start with COMP 202?

- COMP 202 is part of the required courses and it gives an excellent introduction to programming using the Java programming language.
- Students who have taken COMP 202 are well prepared for the programming aspects in COMP 250.
- If you have already taken COMP 202 in your freshman year, you do not have to take it as part of the program.

Special Cases, students with an exceptionally strong background

- A few students may not have taken COMP 202, but have a background equivalent to COMP 202.
- Such students must demonstrate the appropriate background in a placement test and an interview with a SOCS software engineering advisor.
  - The placement test will take place in McConnell 320 10:00-11:00 on Tuesday, August 26th. Note that this test is only for students in the Software Engineering Major **and** who have a substantial background in programming in a high-level language.
  - Students should also sign-up (at the School of Computer Science front desk) for an advising appointment with Software Engineering advisor Prof. Verbrugge at which time you will be asked more about your background and your placement test results will be examined.

Approved First Year Program - starting at COMP 250

Fall:

1. COMP 250 - Intro. to Comp. Sci. (COMP 202 or equiv.)
2. MATH 240 - Discrete Structures (MATH 133 and 260, coreq.)
3. MATH 260 - Intermediate Calculus (MATH 141)
4. MATH 323 - Probability Theory (MATH 141)
5. elective

Winter:

1. COMP 206 - Intro. to Software Systems (COMP 202)
2. COMP 251 - Data Structures and Algorithms (COMP 250, MATH 240)
3. MATH 223 - Linear Algebra (MATH 133)
4. MATH 324 - Statistics (MATH 323)
5. elective

What to do next ...

- If you wish to apply to change to the Software Engineering major...
  1. get the application to transfer at the end of this session
  2. fill in the form and bring it to McConnell 318
     before Wednesday, August 27
- If you wish to skip COMP 202 (only for strong backgrounds) ...
  1. attend the placement exam
     on Tuesday, August 27, 10:00am, McConnell 320
  2. sign up for advising appointment with Professor Verbrugge
- Have your first year schedule approved and register for courses...
  - Students should have their program approved by Ms. Judy Kenigsberg
  - Students with a program substantially different from the approved program should see one of the Software Engineering advisors (Profs. Kienzle, Vangheluwe, or Verbrugge).

The reference ...

http://www.cs.mcgill.ca/~joerg/se/se.html