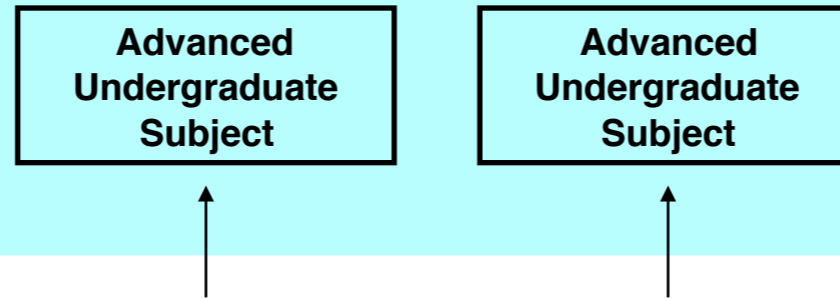


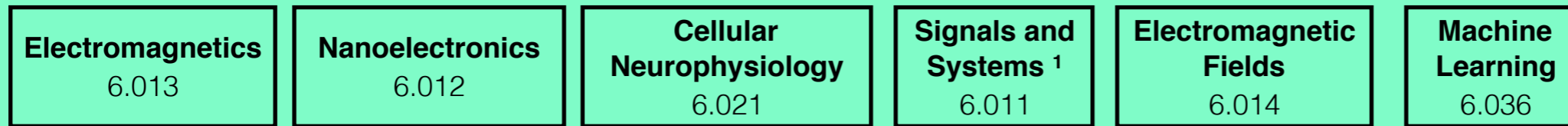
# 6-1: Electrical Science and Engineering

The 6-1 curriculum builds primarily on the Physics II and Calculus II GIRs; not all courses require a GIR as a pre-requisite

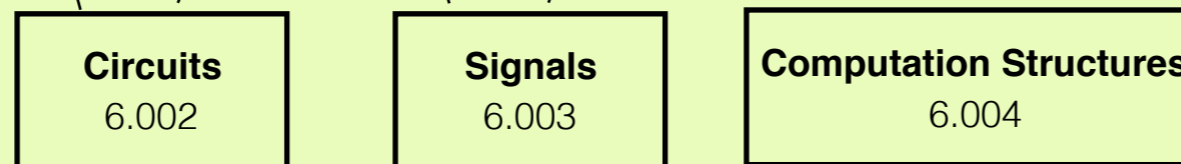
**advanced undergraduate subjects** build on header material; exact pre-requisites vary



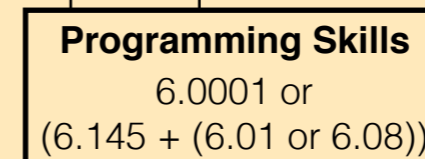
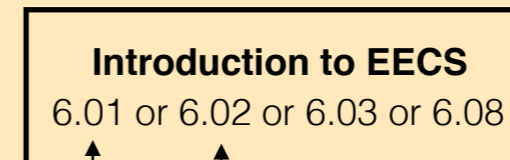
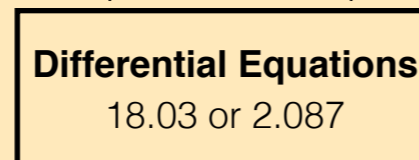
students choose three **header subjects**, which typically rely on a foundation course as a pre-requisite



**foundation subjects** build on introductory material



**introductory subjects** introduce students to the breadth of our department, and teach fundamental skills for electrical engineering and computer science



**Communication**  
6.UAT or 6.UAR

**Course 6 Elective**

**Course 6 Elective**

three additional subjects are typically taken in the junior or senior year

<sup>1</sup> 6.011 also requires a probability prerequisite

This is a common roadmap for 6-1, but many permutations are possible. For instance, there is a significant amount of flexibility in what order students take their foundations, and in whether they finish their foundations before taking any headers.

**Semester 1:** Programming skills, Differential Equations

**Semester 2:** Introduction to EECS, Foundation #1

**Semester 3:** Foundation #2, Foundation #3

**Semester 4:** Header #1, Header #2

**Semester 5:** Header #3, AUS #1

**Semester 6:** AUS #2, Course 6 Elective #1

6.UAT or 6.UAR and the second Course 6 elective are typically taken at some point during semesters 4-6

# 6-2: Electrical Engineering and Computer Science

The 6-2 curriculum builds primarily on the **Physics II and Calculus II GIRs**; not all courses require a GIR as a pre-requisite

**advanced undergraduate subjects** build on header material; exact pre-requisites vary

Advanced Undergraduate Subject

Advanced Undergraduate Subject

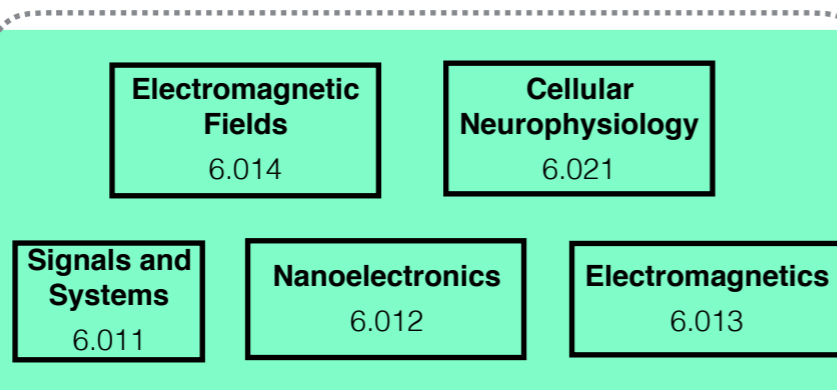
Course 6 Elective

Course 6 Elective

Communication  
6.UAT or 6.UAR

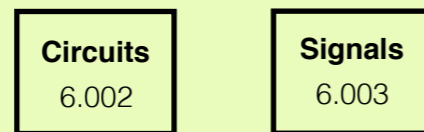
three additional subjects are typically taken in the junior or senior year

students choose three **header subjects**, which typically rely on a foundation course as a pre-requisite

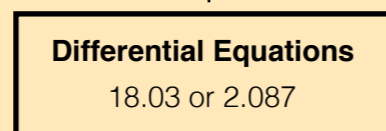


exact pre-requisites vary; most EE headers rely on at least one EE foundation

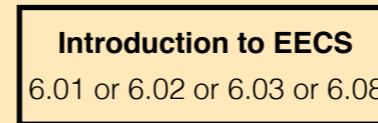
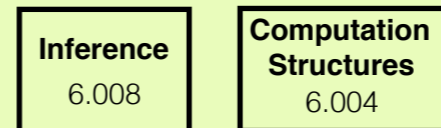
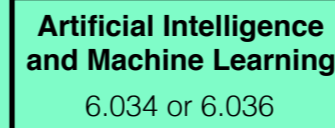
students choose three **foundation subjects**, which build on introductory material



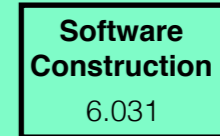
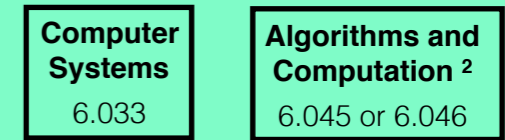
**introductory subjects** introduce students to the breadth of our department, and teach fundamental skills for electrical engineering and computer science



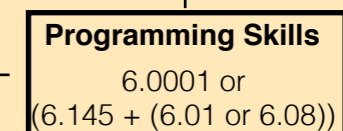
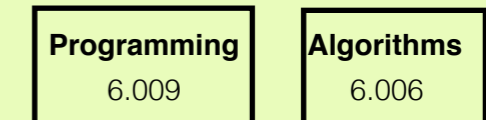
**Electrical Engineering Subjects**



**EECS Subjects**



exact pre-requisites vary; most CS headers rely on at least one CS foundation



**Computer Science Subjects**

**students must choose headers and foundations to span the breadth of EE, EECS, and CS<sup>1</sup>**

<sup>1</sup> of the headers and foundations, two must be from EE, two from CS, and one from EECS

<sup>2</sup> 6.045 and 6.046 also require 6.042, either as a direct pre-req or as a pre-req to 6.006

This is a common roadmap for 6-2, but many permutations are possible. For instance, there is a significant amount of flexibility in what order students take their foundations, and in whether they finish their foundations before taking any headers.

**Semester 1:** Programming skills, Differential Equations

**Semester 2:** Introduction to EECS, Foundation #1

**Semester 3:** Foundation #2, Foundation #3

**Semester 4:** Header #1, Header #2

**Semester 5:** Header #3, AUS #1

**Semester 6:** AUS #2, Course 6 Elective #1

6.UAT or 6.UAR and the second Course 6 elective are typically taken at some point during semesters 4-6

# 6-3: Computer Science and Engineering

The 6-3 curriculum builds primarily on the **Calculus II GIR**; not all courses require a GIR as a pre-requisite

## advanced undergraduate subjects

build on header material; exact pre-requisites vary

Advanced Undergraduate Subject

Advanced Undergraduate Subject

## header subjects typically rely on a foundation course as a pre-requisite

Artificial Intelligence and Machine Learning  
6.034 or 6.036

Computer Systems  
6.033

Software Construction  
6.031

Algorithms and Computation  
6.045 or 6.046

## foundation subjects build on introductory material

Computation Structures  
6.004

Programming  
6.009

Algorithms  
6.006

## introductory subjects

introduce students to the breadth of our department, and teach fundamental skills for electrical engineering and computer science

Introduction to EECS  
6.01 or 6.02 or 6.03 or 6.08

Programming Skills  
6.0001 or  
(6.145 + (6.01 or 6.08))

Discrete Math  
6.042

Communication  
6.UAT or 6.UAR

Course 6 Elective

two additional subjects are typically taken in the junior or senior year

This is a common roadmap for 6-3, but many permutations are possible. For instance, there is a significant amount of flexibility in what order students take their foundations, and in whether they finish their foundations before taking any headers.

**Semester 1:** Programming skills, Discrete math

**Semester 2:** Introduction to EECS, Foundation #1

**Semester 3:** Foundation #2, Foundation #3

**Semester 4:** Header #1, Header #2

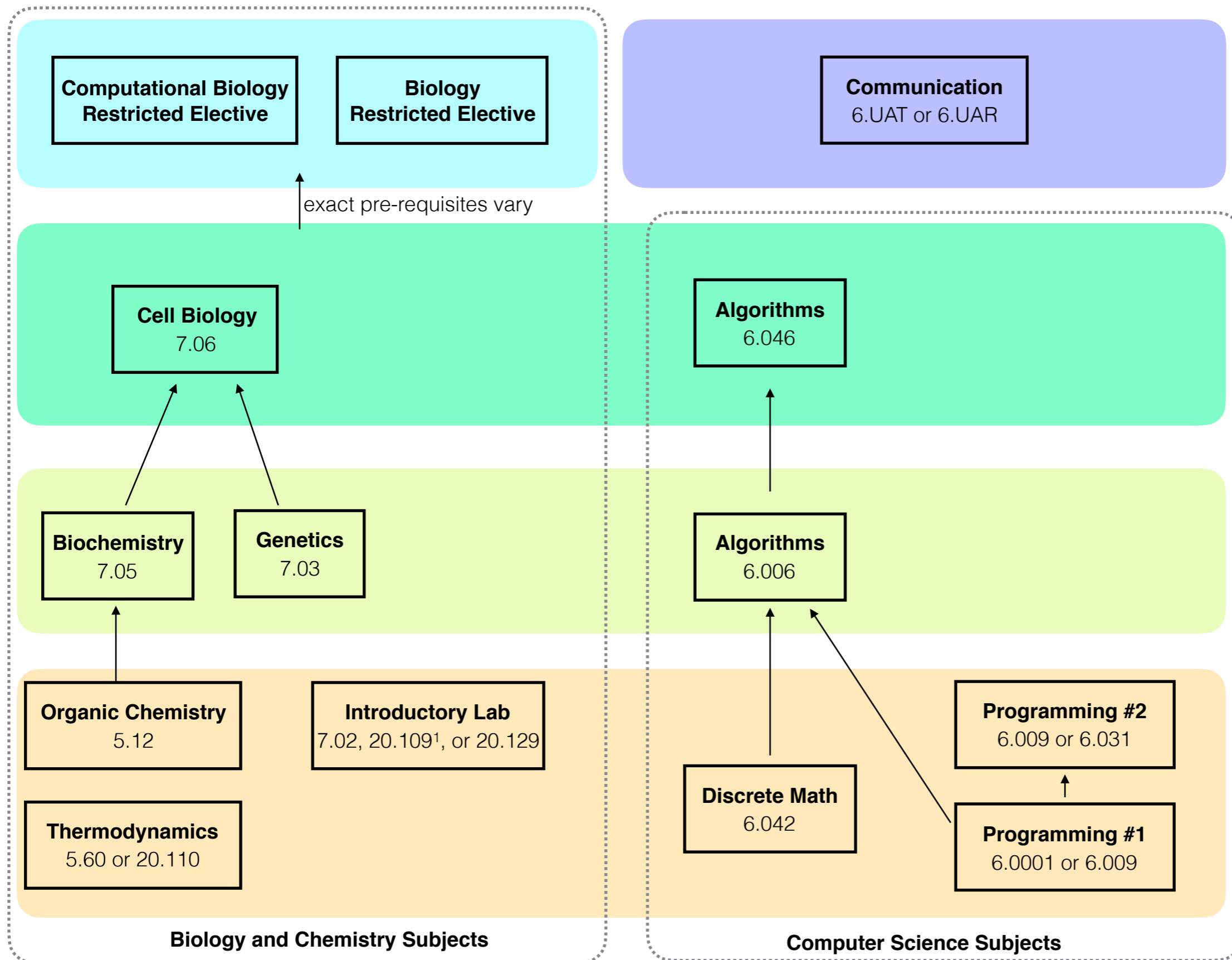
**Semester 5:** Header #3, Header #4

**Semester 6:** AUS #1, AUS #2

6.UAT or 6.UAR and the Course 6 elective are typically taken at some point during semesters 4-6

# 6-7: Computer Science and Molecular Biology

The 6-7 curriculum builds primarily on the **Chemistry and Biology GIRs**; not all courses require a GIR as a pre-requisite



<sup>1</sup> 20.109 has additional pre-requisites

This is one possible roadmap for 6-7, but many permutations are possible. For instance, there is a significant amount of flexibility in what order students take their introductory courses

**Semester 1:** Programming #1, Discrete math

**Semester 2:** Programming #2, Organic Chemistry, Thermodynamics

**Semester 3:** Intro Lab, Genetics

**Semester 4:** Biochemistry, Algorithms

**Semester 5:** Cell Biology, Algorithms

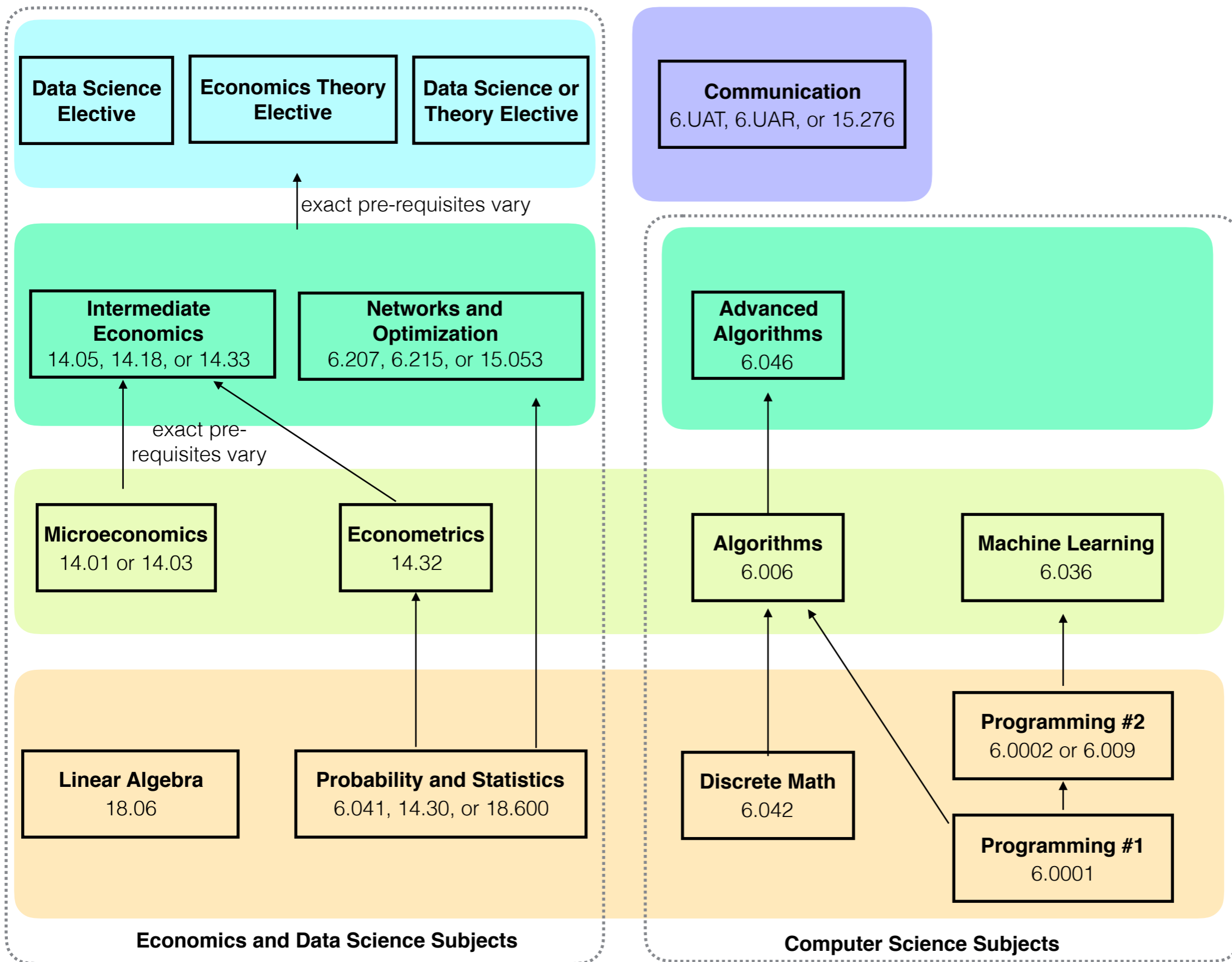
**Semester 6:** Computational Biology REST, Biology REST

6.UAT or 6.UAR is typically taken at some point during semesters 4-6



# 6-14: Computer Science, Economics, and Data Science

The 6-14 curriculum builds primarily on the **Calculus II GIR**; not all courses require a GIR as a pre-requisite



This is one possible roadmap for 6-14, but many permutations are possible. For instance, there is a significant amount of flexibility in what order students take their introductory courses

- Semester 1:** Linear Algebra, Discrete Math, Programming #1 + #2 (if 6.0002)
- Semester 2:** Probability and Statistics, Programming #2 (if 6.009), Microeconomics
- Semester 3:** Algorithms, Econometrics
- Semester 4:** Machine Learning, Advanced Algorithms
- Semester 5:** Intermediate Economics, Networks and Optimization, Elective #1
- Semester 6:** Elective #2, Elective #3

The communications class is typically taken at some point during semesters 4-6