### Bioinformatics Capstone

#### Bioinformatics Models and Algorithms [F]
- **BME 205**
- **BME 230A**
  - Intro. Computational Genomics and Systems Biology [W]
- **BME 230B**
  - Adv. Computational Genomics and Systems Biology [S]

#### IGEM
- **BME 180**
  - (2 units)
  - Professional Practice [Sp]
- **BME 188A**
  - Synthetic Biology Research A [Su]
- **BME 188B**
  - Synthetic Biology Research B [Sp]

#### Senior Design
- **BME 129A**
  - Bioengineering Project I [F]
- **BME 129B**
  - Bioengineering Project II [W]
- **BME 129C**
  - Bioengineering Project III [Sp]

#### Senior Thesis
- **BME 195**
  - Senior Thesis [S]

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#### Design Elective
- **BME 128 or BME 140 or BME 177**
  - Cannot be same as Design Elective

One of the above:

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#### Bioinformatics
- **BME 105 or BIOL 105**
- **BME 110**
- **BME 202A or 21A**
- **BME 160/L**
  - (6 units)
  - Research Programming/Lab [W/Sp]
- **BME 160 or 205**
- **BME 163**
  - Applied Visualization and Analysis [Sp]

#### Humanities
- **BME 80G**
  - Bioethics [F]
  - OR
  - **BME 18**
    - Sci Principles of Life [F]

#### Math and Statistics
- **Math 3 or Math Placement of 400 or higher**
  - Math 19A (or Math 20A)
  - Calculus I [FW/Sp/Su]
- **Math 19A or 20A**
- **Math 19B**
  - (or Math 20B)
  - Calculus II [FW/Sp/Su]
- **Math 19B**
  - AMS 131
  - Intro to Probability Theory [FW/Sp/Su]
- **AMS 131 or CMPE 107 AMS 132**
  - Statistical Inference [W]

#### Physics and Electronics
- **Math 19A or 20A**
  - PHYS 5A/L (6 units)
  - (or PHYS 6A/L)
  - Intro to Physics/Lab [FW]
- **Math 19A**
  - BME 51A
  - Applied Electronics I [W]
- **BME 51A**
  - BME 51B
  - Applied Electronics II [Sp]

#### Chemistry
- **Chem 1B/M**
  - (7 units)
  - General Chemistry/Lab [FW/Sp/Su]
- **Chem 1C/N**
  - (7 units)
  - General Chemistry/Lab [FW/Sp/Su]
- **Chem 8A/L**
  - Organic Chemistry / Lab [FW/Sp/Su]
- **Chem 8A or 108A**
  - Organic Chemistry / Lab [FW/Sp/Su]

#### Biology and Bioengineering
- **BME 129A**
  - Bioengineering Project I [F]
- **BME 129B**
  - Bioengineering Project II [W]
- **BME 129C**
  - Bioengineering Project III [Sp]

#### Elective
- **BIOL 115, METX 119, BIOL 100C, BME 122H, BME 128, BME 128L, BME 130, BME 132, BME 140, BME 155, BME 170, BME 177, BME 178, or 5-unit BME grad course (e.g. BME 230B)**
  - Cannot be same as Design Elective

One of the above:

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#### One of the following capstone sequences

- **CMPS 12B and CMPE 107 or AMS 131 and BME 205 and previous or concurrent enrollment in BME 105A**

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### Humanities
- **BME 80G**
  - Bioethics [F]
  - OR
  - **BME 18**
    - Sci Principles of Life [F]

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### Math and Statistics
- **Math 3 or Math Placement of 400 or higher**
  - Math 19A (or Math 20A)
  - Calculus I [FW/Sp/Su]

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### Physics and Electronics
- **Math 19A or 20A**
  - PHYS 5A/L (6 units)
  - (or PHYS 6A/L)
  - Intro to Physics/Lab [FW]

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### Chemistry
- **Chem 1B/M**
  - (7 units)
  - General Chemistry/Lab [FW/Sp/Su]

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### Biology and Bioengineering
- **BME 129A**
  - Bioengineering Project I [F]

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### Elective
- **BIOL 115, METX 119, BIOL 100C, BME 122H, BME 128, BME 128L, BME 130, BME 132, BME 140, BME 155, BME 170, BME 177, BME 178, or 5-unit BME grad course (e.g. BME 230B)**
  - Cannot be same as Design Elective

One of the above:
# 2018-19 Biomolecular Engineering and Bioinformatics: Biomolecular

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- Denotes prerequisites and corequisites
- $ Not including BME 205 or BME 230A if using Bioinformatics capstone
- # Please note that BME 205 has prerequisites not required by the Biomolecular Concentration

Student Name:

Staff Advisor Signature: