2018-19 Biomolecular Engineering and Bioinformatics: Bioinformatics

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

Chemistry
- Previous or concurrent enrollment in Math 3 or Math Placement score of 300 or higher
- Chem 1A General Chemistry [F/W/Sp/Su]
- Chem 1B/M (7 units) General Chemistry/Lab [F/W/Sp/Su]
- Chem 1A Chem 1C/N (7 units) General Chemistry/Lab [F/W/Sp/Su]
- Chem 1B and 1C Chem 8A Organic Chemistry [F/W/Sp/Su]
- Chem 8A or 108A Chem 8B Organic Chemistry [F/W/Sp/Su]

Biology and Bioengineering
- Bioinformatics
  - BIOL 20A Cell & Molecular Biology [F/W/Sp/Su]
  - BIOE 20B Developmental & Physiology [F/W/Sp/Su]
  - BIOL 20A and BIOE 20B or BIOL 105 (or BIOL 105) Genetics [F]
  - BME105 (or BIOL 105) Bioinformatics Models and Algorithms [F]

Bioinformatics
- BME 105 or BIOL105 or BIOL 100 or BIOC 100A BME 110 Computational Biology Tools [F/W]
- BIO 210 or 21A BME 160/L (6 units) Research Programming/Lab [W/S]
- BME 160 or 205 BME 163* Applied Visualization and Analysis [Sp]

Elective
- BIOL 115, METX 119, BIOC 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)

One of the above:

Programming
- Math 19A or 20A CMPE 16 Discrete Math [F/W/Sp/Su]
- CMPS 12A/L% (7 units) Intro to Programming [F/W/Sp/Su]
- CMPS 12B/M (7 units) Data Structures/Lab [F/W/Sp/Su]

Bioinformatics Capstone
- CMPS 12B and CMPE 107 or AMS 131 and BIOL 20A and previous or concurrent enrollment in BIOC 100A BME 205 Bioinformatics Models and Algorithms [F]
- BME 205 BME 230A Intro. Computational Genomics and Systems Biology [F]
- BME 230B Adv. Computational Genomics and Systems Biology [V]

BME students may do the BINF capstone. BINF students MUST do the BINF capstone.
### 2018-19 Biomolecular Engineering and Bioinformatics: Bioinformatics

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- Denotes prerequisites and corequisites

* The approved catalog copy for bioinformatics for 2018-19 requires Math 21 or 22 or 21A or AMS10 and does not require BME 163, but we advise replacing the math course with BME 163

% Students may choose to take CMPS 5J and 11; or CMPE 12/L and 13/L in place of CMPS 12A/L

$ Not including BME 205 or BME 230A if using Bioinformatics capstone

**Student Name:**

**Staff Advisor Signature:**