Major: Biochemistry & Molecular Biology/Biotechnology

*Nov. 2023

Name: _____ PID _____ **Credits required for graduation: 120**

Integrative Studies and Writing- University Requirement: (20 credits)

WRA 101/195H-4_____ **or** LB 133-4 _____

ISS 2XX_____ -4
ISS 3XX_____-4

IAH 201-210 -4 _____
IAH 211 **or** greater-4 _____

Note: ISS/IAH courses must be in at least **2** different Diversity Designations (N, I, D)

Biochemistry

BMB 101-1 ____ F lect.
BMB 461-3 ____ F S lect. 1
BMB 462-3 ____ F S lect. 2
BMB 470 (was 472)-4___ F lab
(*or other Molecular Biology Lab – see below*)**
BMB 471-4 ____ S lab
AND
BMB 495-2 ____ S seminar
OR
BMB 499 (2-8) ___ (Thesis)
OR
LB 492-4 ____ F S seminar
(Required for Lyman Briggs Students)

Electives (optional)
BMB 490- ____ research

Chemistry | **Honors** | **Lyman Briggs**

CEM 151-4 ____ F inorg. 1 **or** CEM 141-4 ____ F S US **or** CEM 181H-4 ____F **or** LB 171-4 ____F S
CEM 152-3 ____ S inorg. 2 **or** CEM 142-3 ____ F S US **or** CEM 182H-4 ____S **or** LB 172-3 ____F S
CEM 161-1 ____ F S US lab 1 **or** CEM 185H-2 ____F **or** LB 171L-1 ____F S
CEM 162-1 ____ F S US lab 2 **or** CEM 185H-2 ____F **or** LB 172L-1 ____F S
CEM 262-3 ____ F S US quantitative analysis
CEM 351-3 ____ F organic 1 **or** CEM 251-3 ____ F S US organic 1 **or** LB 271-3 ____ F S orgo 1
CEM 352-3 ____ S organic 2 **or** CEM 252-3 ____ F S US organic 2
CEM 355-2 ____ S US organic lab 1
CEM 356-2 ____ F organic lab 2
CEM 383-3 ____ F US phys. chem. 1 **or** CEM 484-3 ____ S molec. thermo. **(MTH 235 is a prereq.)**

Physics

Physics I: PHY 241-4____F **or** PHY 183-4 F S US **or** PHY 221-4____F S **or** LB 273-4 ____ F (Lyman Briggs Only) **or** PHY 193H-4_____ F (Honors)
Physics II: PHY 242-4____S **or** PHY 184-4 F S US **or** PHY 222-4____F S **or** LB 274-4 _____S (Lyman Briggs Only) **or** PHY 294H-4_____ S (Honors)

Non-Calc Physics: Requires calculus bridge courses:**
Physics I: **PHY 231-3 _____F S US + PHY 233B-2____F S US (bridge)
Physics II: **PHY 232-3 _____ F S US + PHY 234B-2____F S US (bridge)

NOTE: Lyman Briggs students starting at MSU in Fall 2019 or after, who are not taking LB 273/274, must complete PHY labs - see options below

Computer Science/Math | **Lyman Briggs** | **Honors**

CMSE 201–4 ____ F S
MTH 132-3 ____ F S US (calc 1) **or** LB 118-4 ____ F S **or** MTH 152H-3 _____ F S
MTH 133-4 ____ F S US (calc 2) **or** LB 119-4 ____ F S **or** MTH 153H-3 _____ S

Biology | **Lyman Briggs** | **Honors**

BS 162-3 ____ F S US **or** LB 144-4 ____ F S **or** BS 182H-3 ____ F
BS 161-3 ____ F S US **or** *LB 145-5 ____ F S **or** BS 181H-3 ____ S
BS 171-2 ____ F S US **or** *LB 145-5 (*LB 145 replaces BS 161&171) **or** BS 191H-2 ____ S lab

Premeds and all LB Students also need
BS 172-2 ____F S US **or** LB 144-4 ____ F S **or** BS 192H-2 ____F

General Genetics

IBIO/PLB 341-4 ____ F S US **or** CSS 350-3 ____

****Molecular Biology Lab (3 credits)**

BMB 470 -3 ____F **or** CSS 451-3 ___ S **or** MMG/MGI 408-3 ____F

Advanced Selectives (300-400 level) (9 credits)
(Visit: https://bmb.natsci.msu.edu/undergraduate/academics/ for approved courses list)

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Premeds and Lyman Briggs students may also need:
(consult with Pre-professional advisor)

PHY 251-1 ____ F S US lab 1 **or** PHY 191-1 _____ F lab 1
PHY 252-1 ____ F S US lab 2 **or** PHY 192–1 ____ S lab 2

Premeds may also need:
(consult with Pre-professional advisor)

PSY _____ - ____ F S US
SOC _____ - ____ F S US

(*Please visit our website for most current requirements checklists: https://bmb.natsci.msu.edu/undergraduate/academics/)