**BIOCHEMISTRY AND MOLECULAR BIOLOGY PLANNING FORM**

**(Candidate Selects either Biology or Chemistry for their main area of licensure, with the other added as an endorsement)**

**Student Name:**

**Education Program: Secondary BMB**

**BA or MAT:**

**Content Major:**

**Content Major Advisor:**

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| **Secondary BMB Required Content Area/ Licensure Courses** |
| **Course** | **Semester Enrolled** | **FFC Requirement** |
| **BIOL 120—**Organismal Biology |  | Natural Sciences |
| **BIOL 221—**Cellular and Molecular Biology |  |  |
| **CHEM 115—**Chemistry I |  | Natural Sciences |
| **CHEM 116—**Chemistry II |  | Natural Sciences |
| **CHEM 220**—Organic Chemistry I |  |  |
| **CHEM 221—**Organic Chemistry II |  |  |
| **CHEM 320**—Physical Chemistry I **ORCHEM 321**—Physical Chemistry II |  | Technology (CHEM 320) Technology and Experiential Learning (CHEM 321) |
| **BMB 300**—Biochemistry |  |  |
| **PHYS 110/120—**Introductory Physics |  | Natural Sciences |
| **PHYS 111/121**—Introductory Physics |  | Natural Sciences |
| **MATH 110**—Calculus I |  | Quantitative Reasoning |
| **MATH 111**—Calculus II |  | Quantitative Reasoning |
| **BMB Biology Elective** |  |  |
| **BMB Elective:**(Select a BIOL course if seeking primary licensure in biology; select a CHEM course if seeking primary licensure in chemistry) |  |  |
| **BMB 493 OR BMB 494 OR BMB 405**—Senior Seminar, Project or Thesis |  |  |
| **Broad Field Science Courses Required for Licensure** |
| **PHYS 101, 102, or 103--**Astronomy |  | Natural Sciences |
| **BIOL 220—**Ecology and Evolution |  | Natural Sciences and Technology |

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| **Additional Courses Required** | **Semester Enrolled** | **FFC Requirement** |
| **PSYC 110**—Intro. to Psychology |   | Natural Sciences (only if taken at LFC) |
| **PSYC 210—**Develop. Psychology |  | Social Sciences |

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| **Secondary Education Required Courses** |
| **COURSE** | **Semester Enrolled** | **FFC Requirement** |
| **EDUC 210**--Observing the Schooling Process |  | Writing Intensive |
| **EDUC 215-**-Instructional Communication |  | Speaking Intensive |
| **EDUC 220/PHIL 220**--Philosophy of Education (EDUC 220 required for MAT candidates)**OR****SOAN 244**--Anthropology of Education **OR****HIST 239**--History of Education |  | Humanities for EDUC 220Humanities and Domestic Pluralism (EDUC 239) |
| **EDUC 313/413**--Reading in the Content Areas |  |  |
| **EDUC 315/415** —Middle School Fieldwork & Seminar  |  | Experiential Learning |
| **EDUC 314/414** —Inclusive Learning Environments |  | Social Sciences and Domestic Pluralism |
| **EDUC 419/ 519L**-- Secondary Curriculum & Instructional Design  |  | \*Technology Intensive for BA candidates |
| **EDUC 420/520** -- Discipline Specific Secondary Instructional Design  |  |  |
| **EDUC 421/521L** —Secondary Student teaching |  | \*Experiential for BA candidates  |
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| **MAT Stand-Alone Courses** |
| **EDUC 501**—Introduction to Teacher Research |  |  |
| **EDUC 519X –** Seminar on Advanced Themes |  |  |
| **EDUC 521X**—Teacher Action Research Project |  |  |

\*EDUC 519 and 521 take place AFTER graduating/earning your BA for MAT students, so cannot count toward technology or experiential tag for MAT students

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|  **Additional Required Courses for Optional Endorsements** |
| **ESL/ Bilingual** | **LBSI** | **Additional Content Area Endorsement** |
| LING 300 |  |  |
| EDUC 448/548 (Pre-requisite EDUC 215) | EDUC 486/586 (Pre-requisite EDUC 314/414) | EDUC 406/506 (Pre-requisite 18 semester hours in relevant content) |

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| **FFC Requirements** | **Semester Enrolled** | **Course** |
| **1 Natural Science** |  | PSYC 110 (only if taken at LFC); multiple content courses above |
| **1 Quantitative Reasoning** |  | MATH 110, 111 |
| **1 Humanities** |  | EDUC 220 or 239 |
| **1 Social Sciences** |  | EDUC 210, 215, 314PSYC 210 |
| **1 Creative and Performing Arts** |  |  |
| **1 Global Perspectives** |  |  |
| **1 Domestic Pluralism** |  | EDUC 239, 314/414, 315/415 |
| **1 Writing Intensive**  |  | EDUC 210 |
| **1 Speaking Intensive**  |  | EDUC 215 |
| **1 Technology Intensive**  |  | EDUC 419 (for BA candidates only)CHEM 320, 321 |
| **Experiential Learning** |  | EDUC 315/415EDUC 421 (for BA candidates only) |

SECONDARY BMB SEMESTER PLANNING SHEET (BA)

**Student Name:**

**Education Program: Secondary BMB (BA)**

**Content Major:**

**Content Major Advisor:**

\*\*Courses in **BOLD** must be taken in that specific semester. Other courses not in BOLD are flexible and can be moved around to other semesters, but should be taken before Fieldwork semester (EDUC 315)\*\*

\*\*Note, the FFC tags noted here are as of spring of 2022. FFC tags may change. It is YOUR responsibility to ensure you are meeting all FFC requirements by the time you graduate

\*\*Need to earn at least B- in all EDUC courses; at least C in all major and licensure courses

**Academic year:**

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| **Fall** | **Spring** | **Summer** |
| **FIYS** | PSYC 110 |  |
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**Academic year:**

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| **Fall** | **Spring** | **Summer** |
| EDUC 210 | EDUC 215 |  |
| PSYC 210 | EDUC 220 |  |
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**Academic year:**

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| **Fall** | **Spring** | **Summer** |
|  | **EDUC 313** |  |
|  | **EDUC 315 (fieldwork)** |  |
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**Academic year:**

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| **Fall** | **Spring** | **Summer** |
| **EDUC 419** | **EDUC 314** |  |
| **EDUC 422** | **EDUC 421↓ (student teaching, 3 credits)** |  |
| **\*EDUC 448 or 486 (optional endorsement courses)** |  |  |
| **EDUC 406 (optional content endorsement course)** |  |  |

\*If earning LBS1 endorsement, EDUC 314 is a pre-requisite for that course. Talk with your advisor about taking EDUC 314 the previous spring rather than during student teaching.

SECONDARY BMB SEMESTER PLANNING SHEET (MAT)

**Student Name:**

**Education Program: SECONDARY BMB (MAT)**

**Content Major:**

**Content Major Advisor:**

\*\*Courses in **BOLD** must be taken in that specific semester. Other courses not in BOLD are flexible and can be moved around to other semesters, but should be taken before Fieldwork semester (EDUC 315)\*\*

\*\*Note, the FFC tags noted here are spring of 2022. FFC tags may change. It is YOUR responsibility to ensure you are meeting all FFC requirements by the time you graduate

\*\*Need to earn at least B- in all EDUC courses; at least C in all major and licensure courses

**Academic year:**

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| **Fall** | **Spring** | **Summer** |
| **FIYS** | PSYC 110 |  |
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**Academic year:**

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| **Fall** | **Spring** | **Summer** |
| EDUC 210 | EDUC 215 |  |
| PSYC 210 | EDUC 220 |  |
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 **Academic year:**

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| **Fall** | **Spring** | **Summer** |
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**Academic year:**

***Complete BA in content major at end of Spring semester (complete minor in Education)***

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| **Fall** | **Spring** | **Summer** |
|  | **EDUC 413** | **EDUC 501** |
|  | **EDUC 415 (fieldwork)** |  |
|  | **EDUC 414** |  |
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**Academic year:**

***Complete MAT and Licensure at end of Spring semester***

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| **Fall** | **Spring** | **Summer** |
| **EDUC 519L** | **EDUC 521L (student teaching)** |  |
| **EDUC 519X (MAT Seminar)** | **EDUC 521X (MAT Seminar** |  |
| **EDUC 520** |  |  |
| **EDUC 506 (optional endorsement course)** |  |  |
| **EDUC 548 or 586 (optional endorsement course)** |  |  |