How to Navigate through Biology Emphases

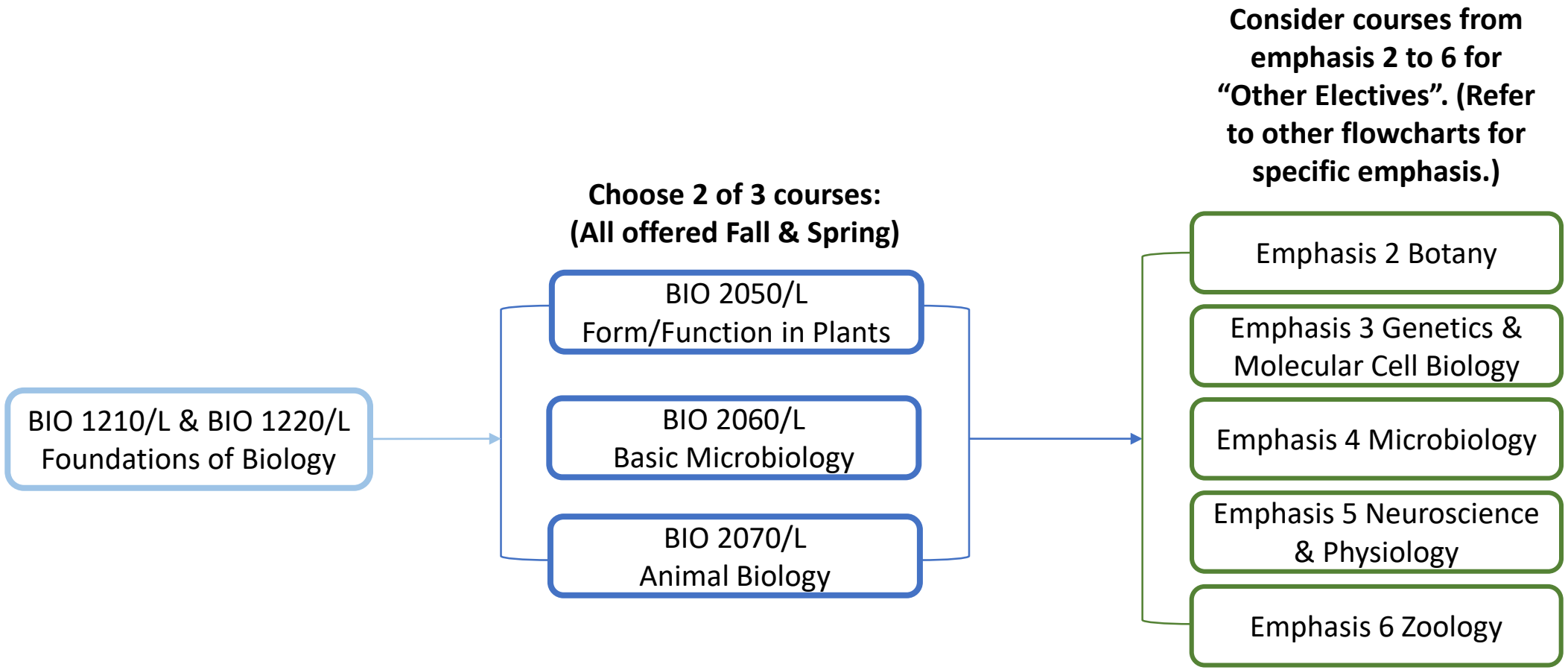
Flowcharts are for guidance; all courses are elective/optional

- Emphases are listed to provide guidance for helping students to choose courses that best fit your career goals, but **there is no requirement to choose a specific emphasis**.
- Any combination of listed courses below will satisfy the required 21-31 units, except that at least 12 units must be at 4000-level or above.
  - Non-Emphasis Electives (0-8 units): Any 2000-4000 level science units + extra GE B5 (BIO only)
- Up to 4 units combined from research supervisory, service learning, and internship courses can also count as emphasis electives. These courses include BIO 2000 or BIO 4000 , BIO 4410 , BIO 4590S / BIO 4590AS , BIO 4610 , BIO 4620 , and BIO 4910S / BIO 4910AS .
- All special topics courses listed as BIO 2990 / BIO 2990A / BIO 2990L or BIO 4990 / BIO 4990A / BIO 4990L can count as emphasis electives.

(Descriptions from Biology Curriculum Sheet)

(1) Integrative Biology Emphasis Course Options

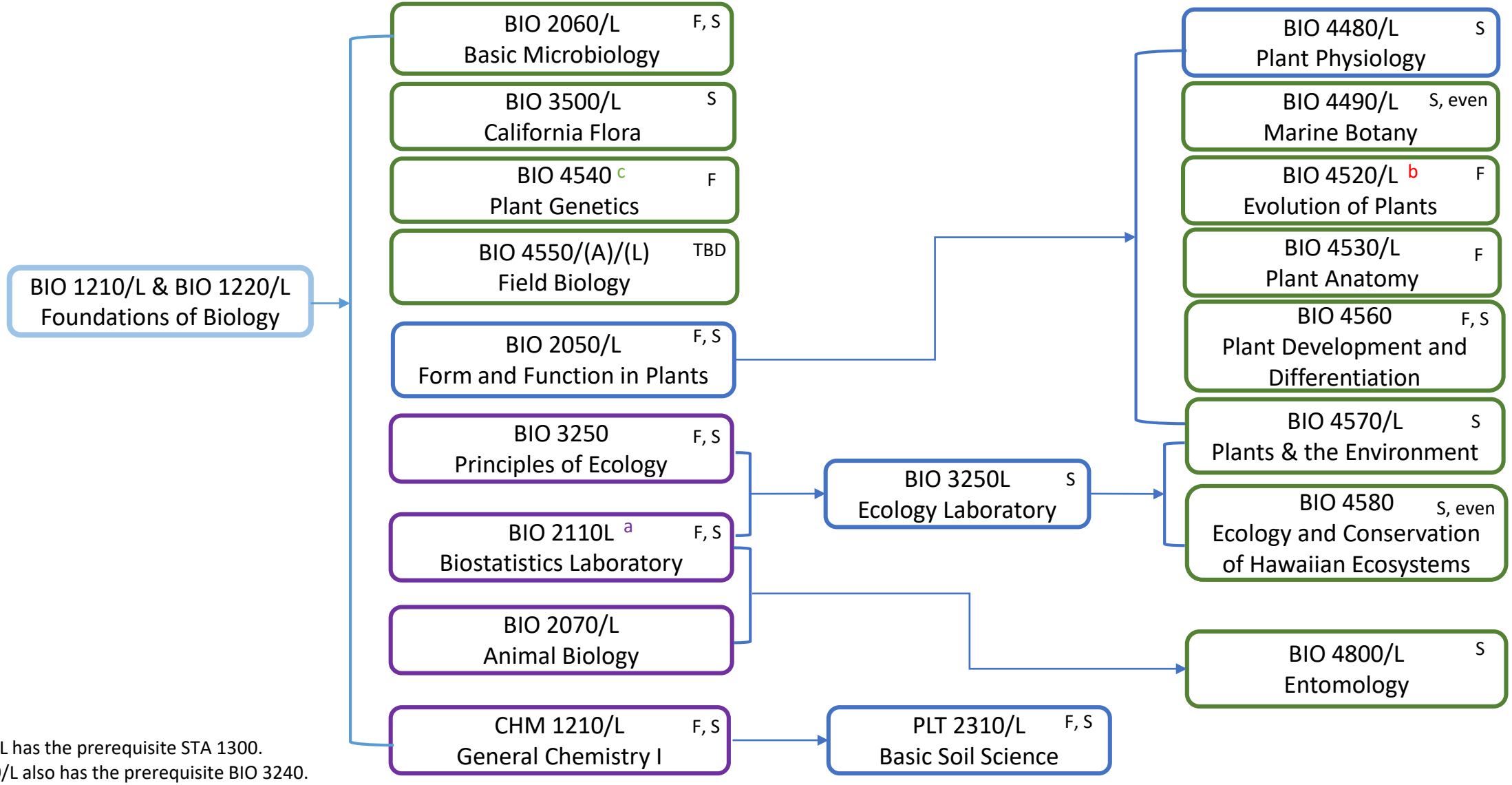
Study integration at all levels of organization from molecules to the biosphere, and in all branches of the tree of life: plants, animals, and microbes



Light blue box – core; dark blue box – "Recommended Electives"; green box – "Other Electives".

(2) Botany Emphasis Course Options

Study of plant physiology, structure, genetics, ecology, classification, and distribution



[a] Bio 2110L has the prerequisite STA 1300.

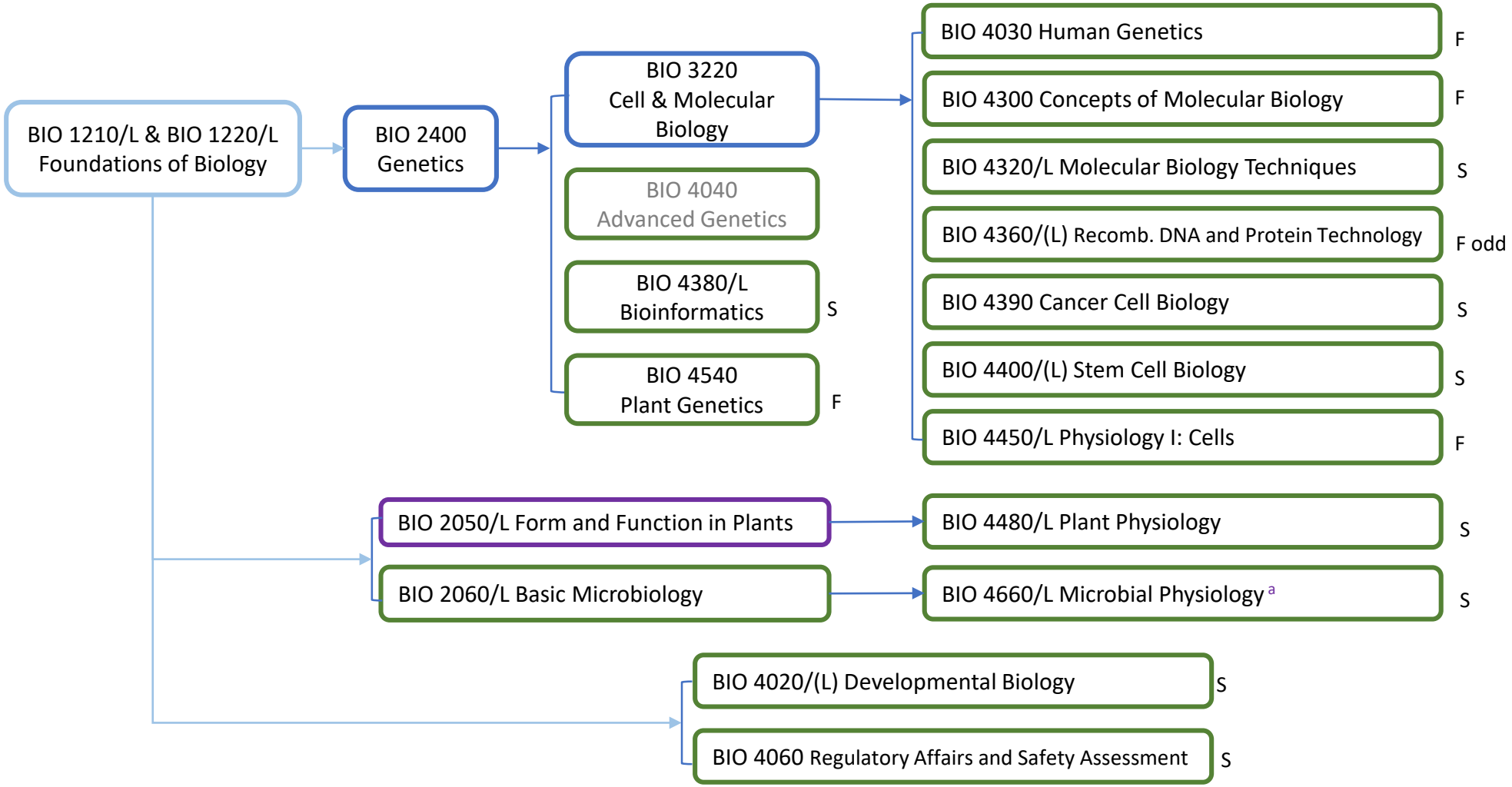
[b] BIO 4520/L also has the prerequisite BIO 3240.

[c] BIO 2400 is recommended as a prerequisite.

Light blue box – core; dark blue box – "Recommended Electives"; green box – "Other Electives". F – Fall; S – Spring

(3) Genetics & Molecular Cell Biology Emphasis Course Options

Study the structure and function of genes and molecules within a cell system



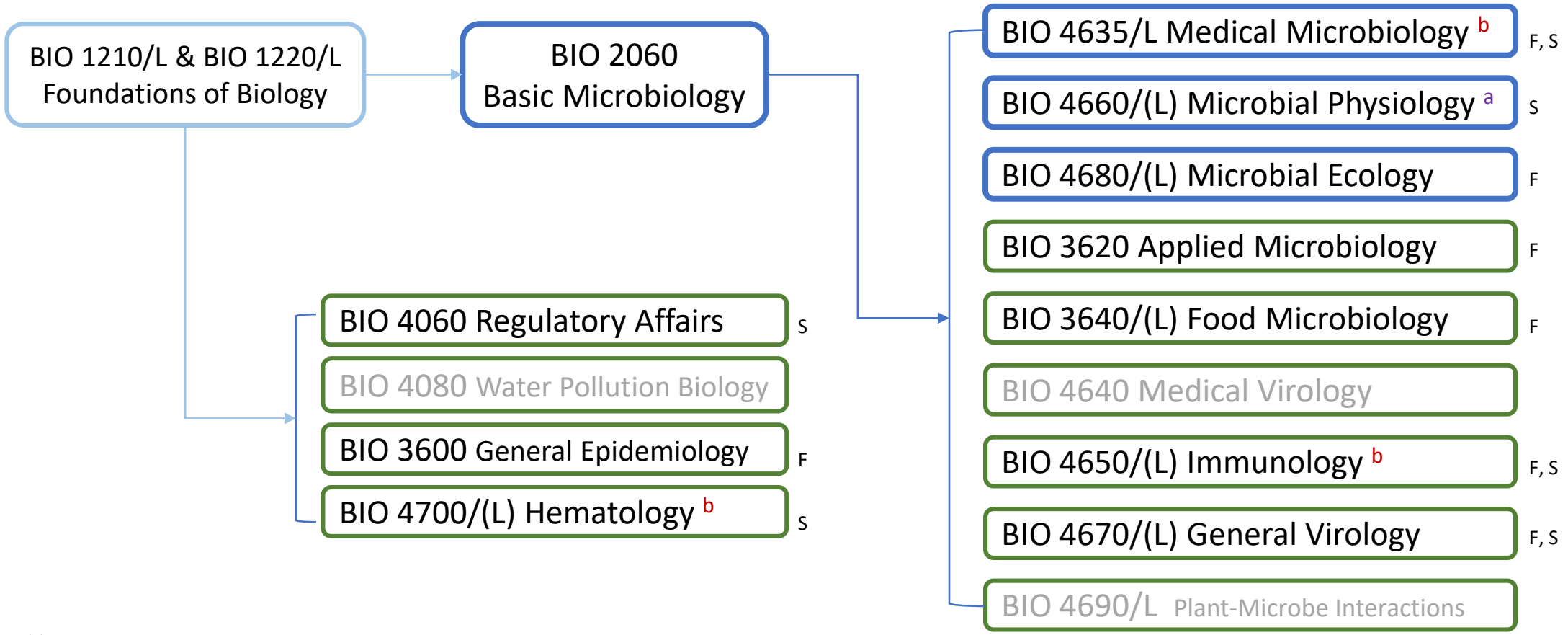
(L) Lecture can be taken without the laboratory; offering term is indicated as Fall (F) and Spring (S).

[a] BIO 4660/L also requires CHM 2010/L or CHM 3140/L Organic Chemistry

Light blue box – core; green box – "Electives" ; purple box – pre-requisite course(s). Gray are not currently offered; F – Fall; S – Spring

(4) Microbiology Emphasis Course Options

Study the world of microbes and their roles in diseases, health, and environment



(L) Lecture can be taken without the laboratory ; Spring (S) courses only, Fall (F) courses only, (F, S) courses offered both Fall and Spring

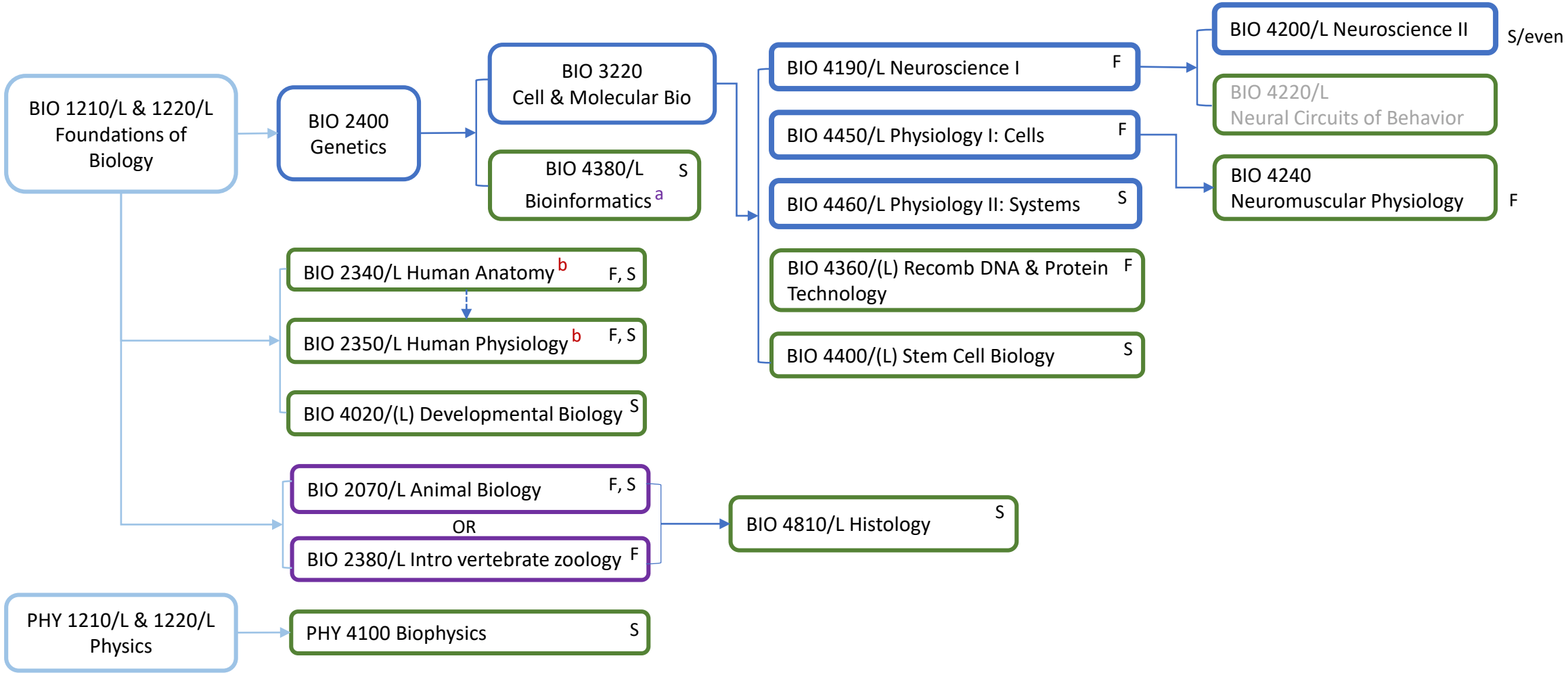
[a] Bio 4660/L also requires CHM 2010/L or CHM 3140/L Organic Chemistry

[b] Requirements for admission to Clinical laboratory Scientist (CLS) programs; please consult the CLS programs for additional requirements.

Light blue box – core; dark blue box – "Recommended Electives"; green box – "Other Electives". Gray are currently not offered; F – Fall; S – Spring

(5) Neuroscience & Physiology Emphasis Course Options

Study the bodily and neural functions of complex organisms



(L) Lecture can be taken without the laboratory; Spring (S) courses only, Fall (F) courses only, (F, S) courses offered both Fall and Spring

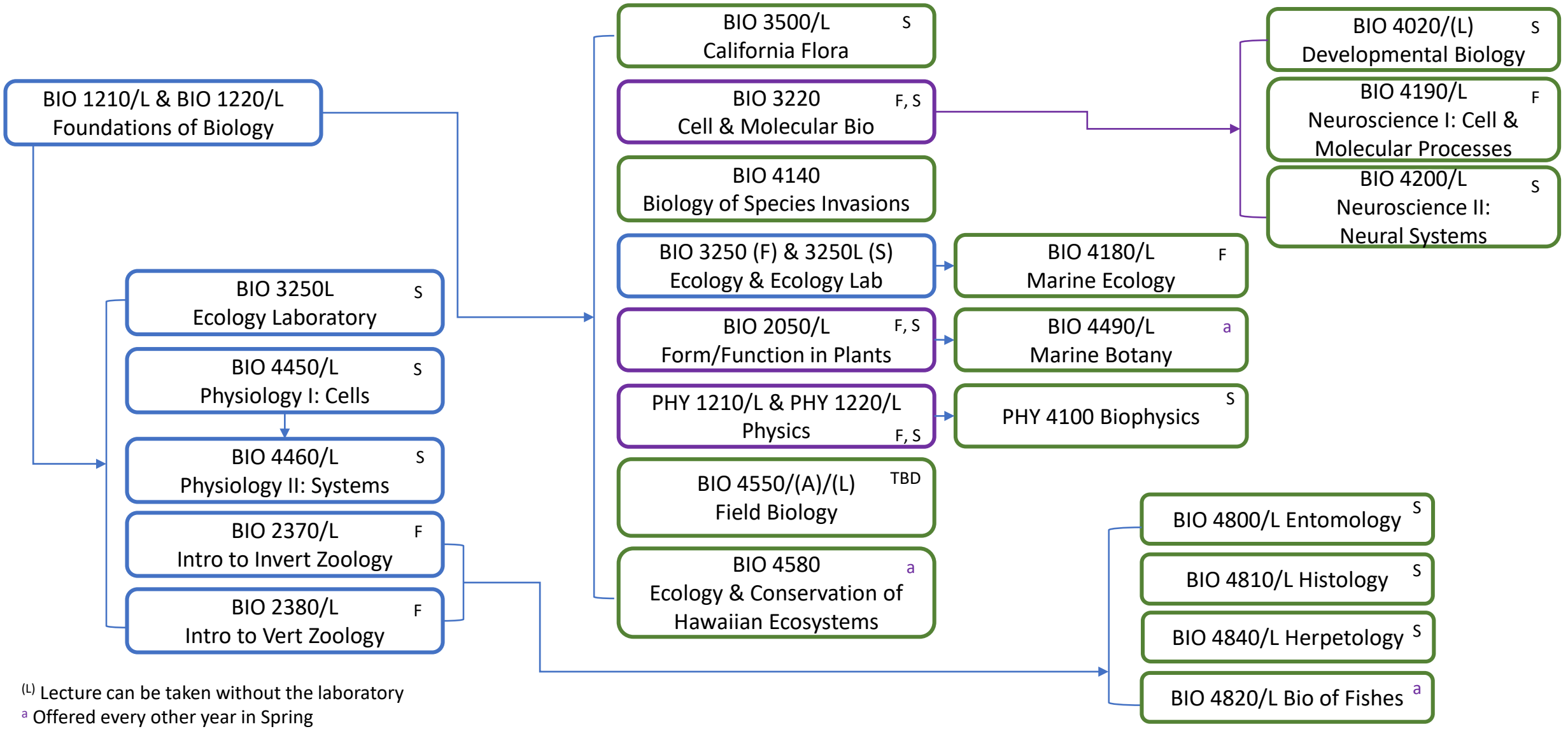
[a] BIO 4380/L also requires Pre-requisite CHM 3280 Biochemistry II if you have not taken BIO 2400.

[b] Recommended to take BIO 2340/L before enrolling in BIO 2350/L

Light blue box – core; dark blue box – "Recommended Electives"; green box – "Other Electives" ; purple box – pre-requisite courses. Gray are currently not offered; F – Fall; S – Spring

(6) Zoology Emphasis Course Options

Study of the behavior, structure, physiology, classification, and distribution of animals



(L) Lecture can be taken without the laboratory

a Offered every other year in Spring

Light blue box – core; dark blue box – "Recommended Electives"; green box – "Other Electives" ; purple box – pre-requisite courses. F – Fall; S – Spring