

PROGRAM FOR BOTANY MAJORS
DEPARTMENT OF BOTANY & PLANT PATHOLOGY
OREGON STATE UNIVERSITY

NAME _____ DATE _____

Checklist of Required Courses

BACCALAUREATE CORE COURSES

Courses that meet each requirement are listed in the Registration Information Handbook and the online General Catalog. If only one course meets a requirement, it is listed below.

Skills Courses (18 credits)

- Fitness (3) [HHS 231 + HHS 241 or any PAC course]
- Mathematics (3) [MTH 105 or higher]
- Writing I (3) [WR 121]
- Writing II (3)
- Speech (3)
- Writing Intensive Course (3-4) [Choose one of the following: BI 371, BOT 323, HSTS 415, HSTS 419, HSTS 425, MB 311]

The following first-year Skills Courses are to be taken and completed satisfactorily within the first 45 hours of OSU-generated credits: WR I [WR 121, minimum passing grade C-]; Mathematics; Speech.

To prepare for the WIC in the major, WR II is to be taken and completed satisfactorily within the first 90 hours of OSU-generated credits.

Transfer students with a sophomore standing or above must complete WR II and Speech within the first 45 hours of OSU-generated credits. These requirements apply to all students, whether full time or part time.

Perspective Courses (24 credits)

- Biological Science with lab (4)
- Physical Science with lab (4)
- Second Biological or Physical Science with lab (4)

Note: The biology and chemistry requirements for the botany major can be used to fulfill the above requirements.

- Cultural Diversity (3)
- Literature & the Arts (3)
- Social Processes & Institutions (3)
- Western Culture (3)

Difference, Power & Discrimination Courses (3 credits)

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Synthesis Courses (6 credits)

The two courses used to fulfill the Synthesis requirement may not be in the same department.

- Contemporary Global Issues (3)
- Science, Technology & Society (3)

DEPARTMENTAL REQUIREMENTS

FOUNDATIONAL SCIENCES (47-50 credits)

Biology (20 credits)

- BI 211(4) BI 212 (4) BI 213 (4)
- BB 314 (4)
- BI 311 (4) or PBG 430 (3) & PBG 431 (1)

Chemistry (27-30 credits)

- CH 231+261 (5) CH 232+262 (5) CH 233+263 (5)
- or CH 121 (5) CH 122 (5) CH 123 (5)
- CH 331 (4) CH 332 (4)
- BB 350 (4) or BB 450 (4) & BB 451 (3)

QUANTITATIVE SKILLS & ANALYSIS (19-21 credits)

Statistics

- ST 351 (4)

Mathematics – a minimum of 8 credits with a final math competency of MTH 112 (at a minimum) chosen from the following courses:

- MTH 111 (4) MTH 112 (4) MTH 231 (4)
- MTH 241 (4) MTH 245 (4) MTH 251 (4)
- MTH 252 (4)

Two additional courses in MTH, ST, CS, or PH chosen from the list above or from the following list [pre-requisites shown in brackets]:

- BOT 476 (3) [BB 314 or BI 311] PH 201 (5) [MTH 112]
- GEOG 360 (4) PH 265 (3) [MTH 251]
- CS 161 (4) [JAVA, MTH 112] CS 162 (4) [JAVA, MTH 231]
- ST 352 (4) [ST 351] ST 411 (4) [ST 351]
- GEOG 361 (4) [GEOG 360, MTH 112, ST 201 or 351]

Other courses may be used if approved by advisor.

Mathematics and subsequent analysis courses are to be determined based on math placement tests and consultation with your academic advisor. MTH 251 & 252 are strongly recommended for students intending to do graduate work.

PLANT BIOLOGY CORE COURSES (28 credits)

- BOT 220 (4) Introduction to Plant Biology
- BOT 313 (4) Plant Structure
- BOT 321 (4) Plant Systematics
- BOT 331 (4) Plant Physiology
- BOT 332 (3) Laboratory Techniques in Plant Biology
- BOT 341 (4) Plant Ecology – or equivalent upper division ecology course with advisor approval
- BOT 407 (1) Senior Seminar [senior year, following Experiential Learning activity]

One course on non-vascular plants chosen from the following:

- BOT 416 (4) BOT 461 (5) BOT 465 (4) BOT 466 (4)

Experiential Learning (Exp. Learning) should be completed before the 4th year.

TRANSCRIPT VISIBLE OPTIONS

All Botany majors take the same core requirements (reverse page), regardless of which **transcript visible option** they pursue. The botany undergraduate core curriculum (reverse page) includes courses in plant structure, ecology, physiology, evolution, systematics, statistics, and genomics. Botany majors will select one of the transcript visible options below to pursue a particular area(s) of plant biology. The options are: Ecology, Evolution and Conservation (EEC); Molecular, Cellular and Genomic (MCG); Plant Pathology (PP), and Comprehensive Botany (CP). A Customizable Option (CO) is available for students with well-defined educational goals and requires an explicit contract between the student and department. Each option is 21-22 credits, with a mix of required and elective courses. A student must choose one of these options, detailed below.

MCG (21 credits)

Required (6 credits):

- BB 451
- BOT 476

At least 6 credits from following:

- BOT 450
- BOT 460
- BOT 475
- BOT 480

At least 9 credits from following:

- other classes from list above
- BB 315 or BB 493
- BB 460
- BB 484
- BB 486
- BI 445
- up to 3 credits Exp. Learning

EEC (21 credits)

Required (12-13 credits):

- BOT 323 or BI 371
- BOT 416 or BOT 425
- BOT 442
- BOT 488

At least 9 credits from following:

- BOT 475
- BI 301
- BI 358
- BI 445
- BI 456
- FES 452
- FW 320
- FW 321
- FES/FW 445
- ST 425
- up to 3 credits Exp. Learning

PP (21 credits)

Required (14 credits):

- BOT 350
- MB 302
- MB 303
- BOT 461

At least 7 credits from following:

- ENT 311
- MB 310
- BOT 413
- BOT 450
- FES 412
- up to 3 credits Exp. Learning

CB (21-22 credits)

Required (16-17 credits):

- BOT 416
- BOT 461 or BOT 465 or BOT 466
- BOT 442
- BOT 488 or BOT 480
- BOT 450 or BOT 460 or BOT 475

Electives (additional 4-5 credits)

- from BOT (or other w/permission of advisor)
- one elective may double count for another BCC or BOT requirement, such as a Bacc Core synthesis course or an additional quantitative skills course
- up to 3 credits of Exp. Learning

CO (21 credits)

This option is for students who have well-defined educational goals and distinctive career aspirations that do not fit easily within the other pre-determined options. The customizable option does not alter any of the other course and degree requirements within the Botany major. Like other options, the customizable option courses are filed under MyDegrees and constitute a contract between the student and the department toward finishing the BOT degree.

Requirements:

- at least 15 credits from option are upper division
- all program courses must be taken for a grade (no S/U)
- courses may not double count with the BOT degree core requirements except for a WIC course or an "additional quantitative skills" course
- a maximum of 3 credits of Exp. Learning may be applied
- up to 9 transfer credits may be applied w/advisor approval
- approved course of study must be filed under MyDegrees

Credit Distribution:

Bacc. Core Curriculum	39
Foundational Sciences	47-50
Quantitative Skills/Analysis	19-21
Plant Biology Core	28
Transcript Visible Option	<u>21-22</u>
	154-160
General Electives	<u>20-26</u>
Total Credits	180

Other courses that can be used for major elective credit are: BOT 322 (Ecampus), BOT 323, BOT 324, BOT 325, BOT 350, BOT 401–Research (1-16), BOT 403–Thesis (1-16), BOT 405–Reading & Conference (1-16), BOT 407–Seminar (1, repeatable), BOT 410–Internship, BOT 413, BOT 416, BOT 425, BOT 440, BOT 442, BOT 458, BOT 460, BOT 475, BOT 476, BOT 480, BOT 488, BB 315, BB 460, BB 484, BB 486, BB 493, BI 301, BI 358, BI 371, BI 456, BI 445, CSS 205, ENT 311, FE 430, FES 412, FES 452, FES/FW 445, FW 320, FW 321, HORT 316, HORT 463, MB 302, MB 303, MB 310, ST 435, Z 440.

It is highly recommended that students take BOT 407–Seminar (1 credit) at least once (it can be taken for credit as often as necessary); BOT 401–Research (the number of credits is variable) is also very useful. BOT 410–Internship (number of credits is variable) can be taken if credits are wanted for off campus job experience involving plant biology. For students going to graduate school, it is recommended that MTH 251 & 252 and BB 450 & 451 be taken.

GRADUATION REQUIREMENTS CHECKLIST

The student has:

- a total of at least 180 credit hours.
- at least 60 hours of upper division credits (300 level or higher).
- at least 24 hours of upper division credits in the major (includes BI 311, BB 314 and PBG 430 & 431).
- a minimum 2.0 GPA in each of the following:
 - All course work taken at OSU.
 - All required science courses (transfer and OSU) for the Botany Major.
- not taken any required science courses for an S/U grade.
- taken the last 45 credits at OSU (or 45 of the last 60 credits, if authorized by the College of Agricultural Sciences).
- formally applied to graduate at least two terms before the term in which the degree requirements will be completed.