

# EXAMINATION CREDIT

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In order to earn a degree from the College of the University of Chicago, a student must obtain credit for at least forty-two quarter courses (4200 units), distributed among general education requirements, major program requirements, and electives, as described in the section on the curriculum at the front of this publication. For students matriculating in Autumn 2017 or later, of the 4200 units, 3800 units of credit must be earned by course enrollment, i.e., not credit by examination.

All students receive credit toward their degrees by taking courses in the College. In addition, students may receive credit and/or satisfy College requirements in the following ways: by placement test; by Advanced Placement (AP) examinations; by accreditation examination; by International Baccalaureate (IB) Programme; and by credit transferred from another institution. The limits and conditions placed on credit earned in these various ways are explained in the following section and on the Transfer Credit (<http://collegecatalog.uchicago.edu/thecollege/transfercredit/>) page. A student must be in residence at the University of Chicago for at least six quarters and must successfully complete a minimum of eighteen courses (1800 units) while in residence. More than half of the requirements for a major or minor must be met by registering for courses bearing University of Chicago course numbers.

Students who have examination credit for a specific course will forgo that credit if they complete an equivalent course in the College.

## PLACEMENT TESTS AND ACCREDITATION EXAMINATIONS

**Placement tests** serve to adapt the needs and backgrounds of individual students to the College curriculum. They place entering students at the proper level of study in a given subject. On the one hand, placement tests minimize the repetition of subjects already mastered and, on the other, they reduce the possibility that students might begin their programs with courses for which they are inadequately prepared. Placement tests measure skill in problem solving as well as general knowledge in a subject field. Students who have some background in the areas being tested are urged to review it, but incoming students without such knowledge are not expected to acquire it over the summer preceding entrance.

Placement tests may be taken only at the time of matriculation and each test may be taken only once. Information that describes these tests is sent to incoming first-year and transfer students.

Credit is available by **accreditation examinations**, which are optional, to those students who have already studied certain subjects at the college level. See the information below under each subject heading for when these examinations are offered. In the case of a course where both experimental and theoretical skills are involved, students may be required to fulfill the laboratory portion along with the rest of the class.

College credit achieved by accreditation examination is entered as units of credit on the student's official academic record. Letter grades are not assigned. An accreditation examination may be taken only once.

## CHEMISTRY PLACEMENT TEST

The Chemistry Placement Test, taken online in the summer via Canvas (<https://canvas.uchicago.edu/>), is required for all first-year and transfer students intending to enroll in General, Honors, or Introductory Chemistry. Without a Chemistry Placement Test score, students will not be able to pre-register for Chemistry courses. After the Chemistry Placement Test is scored, the results will be visible in the Student Portal (<https://my.uchicago.edu/>). The Mathematics Placement Test is also required for students' Chemistry placement. For more information on placement exams, please consult the New Student Advising website (<https://college.uchicago.edu/new-student-advising/placement-ap-tests/>).

### Optional Chemistry Advanced Placement Exam (CAPE)

First-year and transfer students with a strong Chemistry background (i.e., those who place into CHEM 12100 Honors General Chemistry I on the Chemistry Placement Test) will automatically be registered to take the Chemistry Advanced Placement Exam (CAPE). This exam is optional. The CAPE is offered online via Canvas (<https://canvas.uchicago.edu/>) only at the time of matriculation. All students will receive an email later in the summer outlining how to sit for the CAPE. Performing well on this exam and consulting with the Chemistry Director of Undergraduate Studies (DUS) ([chem-dus@lists.uchicago.edu](mailto:chem-dus@lists.uchicago.edu)), may qualify placement out of General Chemistry and into more advanced courses such as CHEM 22000 Organic Chemistry I, CHEM 20100 Inorganic Chemistry I, or CHEM 26100 Quantum Mechanics.

If a student is approved to pursue this option, they may substitute quality grades earned in any three of the following courses for their required General Chemistry course credit:

- CHEM 23300 Introduction to Chemical Biology
- CHEM 26100-26200-26300 Quantum Mechanics; Thermodynamics; Chemical Kinetics and Dynamics
- CHEM 20100-20200 Inorganic Chemistry I-II
- CHEM 20300 Chemistry of Materials

- CHEM 26700 Experimental Physical Chemistry
- CHEM 22700 Advanced Organic/Inorganic Laboratory
- CHEM 26800 Quantum Molecular and Materials Modeling

This advanced placement track may fast-track well-prepared students who wish to advance their studies into the various sub-fields of Chemistry, students who wish to double major or minor in Chemistry, or non-Chemistry majors who wish to enroll in advanced courses that require General Chemistry as a prerequisite.

### ECONOMICS PLACEMENT TEST

Students who wish to begin their economics major with ECON 20000 The Elements of Economic Analysis I in their first year must pass the Economics Placement Test or complete ECON 10000 Principles of Microeconomics. No standardized external exams (IB, AP, A-Levels) will substitute. The placement test will be offered Monday evening of the first week of Autumn Quarter.

### LANGUAGE PLACEMENT TESTS

Each year the University of Chicago teaches over 50 different languages. Language placement tests are required of students who plan to continue in languages studied prior to entrance in the University. Placement tests determine where a student begins language study. The results do not confer credit or satisfy the Language Competency Requirement (<http://collegecatalog.uchicago.edu/thecollege/thecurriculum/#languagecompetence>).

In most cases you will not be able to register for courses into which you were not placed, with the exception of the first quarter of an introductory level (in most cases, a 10100 course). Many languages offer online placement tests in Canvas. They also offer placement for heritage language speakers.

For more information about language placement tests, visit Language Placement FAQs (<https://languages.uchicago.edu/placement-faqs/>).

### MATHEMATICS PLACEMENT TESTS

See also the Placement section on the Mathematics program page (<http://collegecatalog.uchicago.edu/thecollege/mathematics/#placement>).

At what level does an entering student begin mathematics at the University of Chicago? The College and the Department of Mathematics offer several placement exams to help determine the correct starting point for all entering students. During the summer and through Orientation Week, there are three such exams:

- The Online Mathematics Placement Test (must be taken by all entering students)
- The Higher-Level Mathematics Placement Exam
- The Calculus Accreditation Exam

The **Online Mathematics Placement Test** must be taken (once) by **all** entering students in the summer prior to matriculation. The other two exams are offered later in the summer, and students may be invited to take one or the other on the basis of their success on the Online Mathematics Placement Test.

It should be noted that all students are eligible to take MATH 11200 Studies In Mathematics I or MATH 11300 Studies In Mathematics-2 (or various other courses in Statistics and Computer Science) in order to satisfy the general education requirement in the mathematical sciences. What follows are the possible placements for students who want or need to take Calculus for their intended major. The first two quarters of Calculus (MATH 13100-13200 or MATH 15100-15200 or MATH 16100-16200 or MATH 16110-16210) also satisfy the general education requirement, as does completion of any higher-level course which then confers back credit for the first two quarters of Calculus.

Solely on the basis of the Online Mathematics Placement Test, the following mathematics courses are the possible Calculus placements for each student:

- MATH 10500 Fundamental Mathematics I
- MATH 13100 Elem Functions and Calculus I
- MATH 15100 Calculus I
- MATH 15200 Calculus II
- MATH 15300 Calculus III or MATH 15250 Mathematical Methods for Economic Analysis or MATH 18300 Mathematical Methods in the Physical Sciences I or MATH 19620 Linear Algebra

MATH 10500 is recommended for students who need MATH 13100-13200 in their degree programs but who did not place into MATH 13100 originally. Such students should plan to take MATH 10500-13100-13200 in their first year. MATH 10500 counts as a general elective and does NOT count toward the general education requirement in the mathematical sciences.

MATH 13100-13200-13300 and MATH 15100-15200-15300 are the standard Calculus sequences. The former is intended for students with either no Calculus background or a very limited one, and the course has thrice-weekly

lectures and twice-weekly tutorials as required parts of the course. The latter is intended for students with some Calculus background who demonstrate adequate readiness on the placement test.

For social sciences students interested in economics, the Department of Economics recommends taking MATH 15250 directly after MATH 15200 and before MATH 15300. Thus, economics students with the highest-level Online placement should begin in MATH 15250 (unless they are also interested in one of the physical sciences majors listed below). Economics students with a MATH 13100 placement should take the full MATH 13100-13200-13300 sequence before taking MATH 15250.

Physical sciences students interested in the chemistry, biochemistry, physics, astrophysics, molecular engineering, and/or statistics majors should not take MATH 15250 or MATH 15300 or MATH 19620; instead, they should take MATH 18300 and continue in the MATH 18300-18400-18500-18600 sequence. To take MATH 18300, a student should have completed MATH 15200 or have earned the highest-level Online placement. Students with an AP Calculus BC score of 5 or an International Baccalaureate Mathematics HL score of 7 will also be invited to begin in MATH 18300, but these scores do not supersede the Online placement, and the MATH 18300 invitation is not the equivalent of a MATH 15300/15250/18300/19620 placement.

Additionally, students who receive a sufficiently high score on the Online Mathematics Placement Test, as well as students who earn scores of 5 on the AP Calculus BC exam or 7 on the International Baccalaureate HL exam, will also receive an invitation to enroll in MATH 16100 Honors Calculus I or MATH 16110 Honors Calculus I (IBL). These are the first courses in the MATH 16100-16200-16300 Honors Calculus I-II-III and MATH 16110-16210-16310 Honors Calculus I (IBL); Honors Calculus II (IBL); Honors Calculus III (IBL) sequences, which are highly theoretical courses that best prepare students for further study in pure mathematics, although they are also taken by many students from all disciplines and not just by mathematics majors. Students who begin in MATH 16100 Honors Calculus I or MATH 16110 Honors Calculus I (IBL) forgo credit for MATH 15100 Calculus I and/or MATH 15200 Calculus II.

On the basis of the Online Mathematics Placement Test results, namely, by achieving the highest-level Online placement, students may also be invited to take one of the other two exams.

The **Calculus Accreditation Exam** is for students who do not plan to take further mathematics at the University of Chicago but who wish to earn credit for MATH 15100-15200 Calculus I-II. Most students with Online placement of MATH 15300/15250/18300/19620 earn the back credit for MATH 15100 and 15200 by their successful completion of the higher course. But if such a course is not part of a student's academic plan, they can nevertheless earn the back credit for MATH 15100 and 15200 by passing the Calculus Accreditation Exam.

The **Higher-Level Mathematics Placement Exam** is for students who would like to begin their mathematics coursework at the University of Chicago in a higher-level course than MATH 15300/15250/18300/19620. On the basis of this exam, a student may receive placement into:

- MATH 15910 Introduction to Proofs in Analysis
- MATH 20250 Abstract Linear Algebra
- MATH 20300 Analysis in Rn I or MATH 20310 Analysis in Rn I (accelerated) or MATH 20320 Analysis in Rn I (IBL)

A small number of students each year receive an invitation to enroll in MATH 20700 Honors Analysis in Rn I. Admission to this course is by invitation only to those first-year students with superior performance on the Higher-Level Mathematics Placement Exam or to those second-years with an excellent record in MATH 16100-16200-16300 Honors Calculus I-II-III or MATH 16110-16210-16310 Honors Calculus I (IBL); Honors Calculus II (IBL); Honors Calculus III (IBL). Students who are granted three quarters of Calculus placement on the basis of the Higher-Level Mathematics Placement Exam and who do not qualify for admission to MATH 20700 Honors Analysis in Rn I will place into MATH 15910 Introduction to Proofs in Analysis or MATH 20250 Abstract Linear Algebra or MATH 20300 Analysis in Rn I or MATH 20310 Analysis in Rn I (accelerated) or MATH 20320 Analysis in Rn I (IBL). Such students may also consult with one of the Co-Directors of Undergraduate Studies about the option of beginning with MATH 16100 Honors Calculus I or MATH 16110 Honors Calculus I (IBL) so that they would be eligible for admission to Honors Analysis the following year.

Students who submit a score of 5 on the Calculus AB Advanced Placement exam in mathematics receive placement into MATH 15100 Calculus I. Students who submit scores of 4 or 5 on the AP Calculus BC exam or a 7 on the International Baccalaureate Higher Level Calculus exam receive placement into MATH 15200 Calculus II. Currently no course credit or placement is offered in the Department of Mathematics at the University of Chicago for British A-level or O-level examinations.

## PHYSICS ACCREDITATION EXAMINATIONS

Accreditation examinations are administered for the content of PHYS 12100-PHYS 12200-PHYS 12300 and PHYS 14100-PHYS 14200-PHYS 14300. The first examination may be taken by incoming students only at the time of matriculation in the College. Students who pass the first examination (for PHYS 12100 or PHYS 14100) will receive credit for the lecture part of the course only and will then be invited to try the next examination of the sequence. All students who receive advanced standing on the basis of a physics accreditation examination

are interviewed by the undergraduate program chair to determine the extent of their lab experience. Additional laboratory work may be required.

COMPUTER SCIENCE PLACEMENT EXAM

Students with prior experience may place out of one or more of the introductory courses by successfully completing placement exam(s). The College and the Department of Computer Science offer three placement exams to help determine the correct starting point:

- The Online Introduction to Computer Science 1 Exam
- The Online Introduction to Computer Science 2 Exam
- The Systems Programming Exam

The Online Introduction to Computer Science Exams may be taken (once) by entering students or by students who entered the College prior to Summer Quarter 2023. These exams will be offered in the summer prior to matriculation.

Solely based on the Online Introduction to Computer Science 1 Exam, students may be placed into:

- CMSC 14100 Introduction to Computer Science I
- CMSC 14200 Introduction to Computer Science II

Students who place into CMSC 14200 Introduction to Computer Science II will be invited to sit for the Online Introduction to Computer Science Exam 2. Solely based on the Online Introduction to Computer Science 2 Exam, students may be placed into CMSC 14300 Systems Programming I.

Students who place into CMSC 14300 Systems Programming I will be invited to sit for the Systems Programming Exam. Solely based on the Systems Programming Exam, students may be placed into CMSC 14400 Systems Programming II.

Students who place into CMSC 14200 Introduction to Computer Science II will receive credit for CMSC 14100 Introduction to Computer Science I upon successfully completing CMSC 14200 Introduction to Computer Science II.

Students who place into CMSC 14300 Systems Programming I will receive credit for CMSC 14100 Introduction to Computer Science I and CMSC 14200 Introduction to Computer Science II upon successfully completing CMSC 14300 Systems Programming I.

Students who are placed into CMSC 14400 Systems Programming II will receive credit for CMSC 14100 Introduction to Computer Science I and CMSC 14200 Introduction to Computer Science II upon passing CMSC 14400 Systems Programming II.

ADVANCED PLACEMENT CREDIT

Students who request college credit or fulfillment of College requirements for Advanced Placement (AP) examinations taken in high school (i.e., before a student matriculates in the College) are asked to submit an official report of their scores on the AP tests given by the College Entrance Examination Board. The decision to grant credit is reported at the end of the first year in residence and units of credit awarded appear on the student's official academic record.

While AP scores alone are sometimes used to establish placement or to confer credit, satisfactory performance on the College's own placement tests may supplement AP scores and lead to additional credit.

The following chart shows how AP credit is automatically awarded. For further information on how credit may be used toward individual degree programs, a student should consult his or her College adviser. For more information on how AP credit may be used to meet major requirements, refer to the major requirements listed under "Programs of Study" in this catalog.

Students may earn any amount of credit from AP exams, placement, accreditation, IB, or other examinations. However, for students matriculating in Autumn 2017 or later, at least 3800 units must be earned through course enrollment. Students who enrolled prior to Autumn 2017 should consult the catalog of their year of entry for policies regarding the use of AP and examination credit, or speak to their College adviser.

| AP Exam     | Score | Credit Awarded                            |
|-------------|-------|---|
| Art History | 5     | 100 units general elective credit         |
| Biology     | 4     | 100 units general education (BIOS 10130)  |
| Biology     | 5     | 100 units general education (BIOS 10130)+ |
| Calculus AB | 5     | MATH 15100 placement                      |

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|--|---|--|
| Calculus BC  | 4 | MATH 15200 placement                             |
| Calculus BC  | 5 | MATH 15200 placement †                           |
| Chemistry  | 5 | CHEM 11100*                                      |
| Economics: Micro AND Macro   | 5 | 100 units general elective credit                |
| English Language and Composition   | 5 | 100 units general elective credit                |
| English Literature and Composition   | 5 | 100 units general elective credit                |
| Government and Politics:<br>Comparative AND U.S.   | 5 | 100 units general elective credit                |
| History: European  | 5 | 100 units general elective credit                |
| History: U.S.  | 5 | 100 units general elective credit                |
| History: World   | 5 | 100 units general elective credit                |
| Music Theory   | 5 | 100 units general elective credit                |
| Physics C: Mechanics AND E&M   | 5 | PHYS 12100-12200 ‡                               |
| Physics C: Mechanics only  | 5 | PHYS 12100 ‡                                     |
| Physics C: E&M only  | 5 | PHYS 12200 ‡                                     |
| Statistics   | 5 | STAT 22000++                                     |
| Studio Art (2-D Design, 3-D Design,<br>or Drawing)   | 5 | 100 units general elective credit                |
| Chinese Language and Culture;<br>French Language and Culture;<br>German Language and Culture;<br>Italian Language and Culture;<br>Japanese Language and Culture;<br>Latin (Literature or Vergil); Spanish<br>Language and Culture; Spanish<br>Literature and Culture | 5 | Satisfies the Language Competency<br>Requirement |

† A student who submits a score of 5 on the Calculus BC exam will also receive invitations to register for MATH 16100 Honors Calculus I/MATH 16110 Honors Calculus I (IBL) or MATH 18300 Mathematical Methods in the Physical Sciences I.

‡ Students wishing to apply AP credits for "Physics C: Mechanics only" or "Physics C: E&M only" toward the physical sciences general education requirement should plan to complete the requirement with an appropriate course from PHYS 12100-12200 General Physics I-II.

+ A Biological Sciences major requires a "Fundamentals" sequence in general education or an "Advanced Biology Fundamentals" sequence in the major. Students with an AP 4 or 5 who complete three quarters of an "Advanced Biology Fundamentals" sequence are awarded a second AP credit to meet the general education requirement.

\* AP Chemistry: Students with a score of 5 may accept credit for CHEM 11100 Comprehensive General Chemistry I, or they can register for CHEM 12100 Honors General Chemistry I or CHEM 12200 Honors General Chemistry II. Students who complete CHEM 11100 Comprehensive General Chemistry I or CHEM 12100 Honors General Chemistry I on campus will forgo the AP credit.

++ AP Statistics: Will count for general education mathematics credit. May not be used to meet requirements for the statistics major or minor. Students who register and obtain credit for STAT 20000 Elementary Statistics, STAT 22000 Statistical Methods and Applications, or STAT 23400 Statistical Models and Methods forgo AP credit for STAT 22000 Statistical Methods and Applications.

## INTERNATIONAL BACCALAUREATE PROGRAMME

Credit earned for courses in the International Baccalaureate (IB) Programme may be applied to certain general education requirements or to electives as described below. Credit will not be granted for other exams. Course credit is only granted for grades of 7 on Higher-Level IB Examinations (HL). The Language Competency Requirement may be satisfied with grades of 5, 6, or 7 on Standard-Level or Higher-Level IB Examinations in languages other than English. Students who receive a 7 on the Higher-Level Calculus exam receive placement into MATH 15200 Calculus II and an invitation to MATH 16100 Honors Calculus I/MATH 16110 Honors Calculus I (IBL) or MATH 18300 Mathematical Methods in the Physical Sciences I.

| IB Examination               | Score                                     | Credit Awarded                                |
|------------------------------|---|---|
| Biology                      | 7 Higher Level                            | 100 units general education (BIOS 10130)      |
| English                      | 7 Higher Level                            | 100 units general elective credit             |
| Languages other than English | 5, 6, or 7 Standard Level or Higher Level | Satisfies the Language Competency Requirement |

BRITISH A-LEVELS AND OTHER EXAMINATIONS

Credit for A-level work in biology may be awarded by petition to the Senior Adviser in the Biological Sciences Collegiate Division. Students with A-level work in calculus, physics, and chemistry are encouraged to take the College's placement and/or accreditation examinations prior to matriculation; no A-level credit will be granted. Credit for A-levels in other fields except language and economics may be awarded by petition to the Dean of Students in the College.

No credit is given for general education requirements in the humanities or the social sciences. Elective credit may be given only for grades of A in the Advanced Test in liberal arts subjects.

