Clackamas Community College

Common Course Numbering (CCN)

Current	Current Title	CCN Course	CCN Title
CS-135S	Microsoft Excel	BA-169Z	Data Analysis Using Microsoft Excel
BA-226	Business Law I	BA-226Z	Introduction to Business Law
BI-211	General Biology for Science Majors (Cellular Biology)	BI-221Z	Principles of Biology: Cells
BI-212	General Biology for Science Majors (Animal Biology)	BI-222Z	Principles of Biology: Organisms
BI-213	General Biology for Science Majors (Plant Biology & Ecology)	BI-223Z	Principles of Biology: Ecology and Evolution
CH-221	General Chemistry	CH-221Z	General Chemistry I
CH-222	General Chemistry	CH-222Z	General Chemistry II
CH-223	General Chemistry	CH-223Z	General Chemistry III
CH-221L	General Chemistry Lab	CH-227Z	General Chemistry I Laboratory
CH-222L	General Chemistry Lab	CH-228Z	General Chemistry II Laboratory
CH-223L	General Chemistry Lab	CH-229Z	General Chemistry III Laboratory
EC-201	Principles of Economics: Micro	EC-201Z	Principles of Microeconomics
EC-202	Principles of Economics: Macro	EC-202Z	Principles of Macroeconomics
MTH-251	Calculus I	MTH-251Z	Differential Calculus
MTH-252	Calculus II	MTH-252Z	Integral Calculus
MTH-253	Calculus III	MTH-253Z	Calculus: Sequences and Series
SOC-204	Introduction to Sociology	SOC-204Z	Introduction to Sociology
SOC-225	Social Problems	SOC-206Z	Social Problems
SOC-206	Institutions & Social Change	SOC-205Z	Social Change and Institutions

Highlights

- all MTH courses decrease from 5 credits to 4 credits
- CS-135S increases from 3 credits to 4 credits and changes to BA-169Z
- SOC-206 becomes SOC-205Z
- SOC-225 becomes SOC-206Z
- Chemistry Lecture and Lab graded separately whereas before were graded together

Course Change Request

Date Submitted: 03/24/25 7:23 am

Viewing: BA-169Z ~~CS-135S~~ : Data Analysis Using Microsoft Excel

Also listed as: ~~CS-135S~~

Formerly known as: CS-135S

Last approved: 11/21/23 5:07 am

Last edit: 03/24/25 7:23 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

CS-135S:

Business Technology (BT)

Computer Science (CS)

Programs referencing this course

BA-169Z:

CC.ACNTGCLERK: Accounting Clerk

CC.PMTOOLTECH: Project Management Tools & Techniques

AAS.PROJECTMNGT: Project Management

AAS.ACCNTG: Accounting

CC.COMPAPPSPECIAL: Computer Application Specialist

AAS.ADMINPRO: Administrative Professional

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:43 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 21, 2023 by Debra Carino (dcarino)

Credits/Hours/Instructional Method Change

Yes

Reason for proposal

Common Course Numbering Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	BA - Business Administration ~~CS - Computer Science~~
Course Number	169Z ~~135S~~
Department	Computer Science
Division	Arts and Sciences
Course Title	Data Analysis Using Microsoft Excel

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00 ~~3.00~~
Variable Credit	No

Contact hours

Lecture	44.00 ~~33.00~~
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	

CPR

Seminar

Community Education/Drivers Ed

Community Education/Adult

Total 44 ~~33~~

Proposed Effective Term Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Covers Microsoft Excel software skills necessary for evidence-based problem-solving, including workbook editing, formula creation, charting, and pivot tables. Emphasizes hands-on learning using Excel functions to perform data analysis to enhance decision-making. ~~Focuses on advanced spreadsheet capabilities using a current version of Microsoft Excel. Topics include design, construction, and documentation of spreadsheets, use of templates, multiple worksheets, complex formulas, functions and filtering, Pivot Tables, advanced chart features, sorting, database capabilities, finding data, creating subtotals, using lookup tables, finding trends and forecasting, creating and editing macros, validating data, and working with controls.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Foundational Requirement

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

BA-131 or CS-120 or higher or placement into BA-169Z ~~CS-135S~~

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall/Winter/Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Mathematics

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~enter and find data efficiently using a variety of tools (find and select, the name box, keyboard shortcuts);~~
~~2~~	~~apply formatting tools to make organized, easy-to-read worksheets;~~
~~3~~	~~create formulas to create calculated data, including the use of relative, absolute, and partial cell references, names ranges, and data from multiple worksheets and workbooks;~~

	Upon successful completion of this course, students should be able to:
~~4~~	~~apply the built-in Excel functions, including statistical functions, date functions, string functions, financial functions, and logical functions to answer questions;~~
~~5~~	~~use Excel to analyze data: via charts, subtotals, what-if analysis, and PivotTables;~~
~~6~~	~~automate spreadsheet tasks through the use of recorded macros and Visual Basic for Applications;~~
~~7~~	~~integrate Excel with other applications and the Internet, including importing and exporting data in a variety of formats.~~
1	create and manage worksheets using appropriate data formatting; (CCN)
2	construct formulas with relative, absolute, and mixed cell references; (CCN)
3	analyze data using logical, lookup, mathematical, statistical, and text functions; (CCN)
4	manipulate large volumes of data using datasets and tables; (CCN)
5	interpret data using data visualization tools, including pivot tables and charts. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

Outcome Assessment Strategies

Outcomes Assessment Strategies

Major Topic Outline

1. Introduction to spreadsheets. a. Navigation. b. Data entry. c. Simple calculation formulas. 2. Developing a professional-looking worksheet. a. Font formatting. b. Cell formatting and styles. c. Number formats. d. Table formatting. e. Conditional formatting. 3. Working with formulas and functions. a. Cell references. b. Logical functions. c. Date functions. d. Financial functions. e. Statistical functions. f. Lookup functions (HLOOKUP and VLOOKUP) 4. Visual data analysis. a. Creating charts. b. Formatting and customizing charts. c. Pivot charts. d. Sparklines. 5. Managing large quantities of data. a. Excel tables. b. Subtotals. c. Sorting. d. Filtering. e. PivotTables. 6. Managing multiple worksheets and workbooks. a. Grouping worksheets. b. Printing multiple worksheets. c. Reference other worksheets. d. 3-D references. e. Creating a workspace. 7. Creating automated spreadsheet applications. a. Data validation. b. Worksheet/workbook protection. c. Recording macros. d. Using VBA to create custom macros. 8. Performing what-if analyses. a. Goal seek. b. Solver. c. One- and two- variable data tables. d. Scenarios, including summary reports and pivot table reports. 9. Integrating Excel with other applications. a. Importing data. b. Exporting data (including MS Query, comma delimited files, XML data, and web query data). c. Querying databases.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

How does it transfer?

other (provide details)

Details of how course transfers

The Bachelor of Applied Science in Technology & Management at OIT lists 60 credits of CTE courses as the requirements for the first 4 terms of the degree. CS 135S qualifies as a CTE course for this degree.

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Course lists provided from the institution along with OIT program information (see https://catalog.oit.edu/preview_program.php?catoid=14&poid=3576)

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:43 am

Viewing: **BA-226Z** ~~**BA-226**~~ **: Introduction to Business Law~~I~~**

Also listed as: ~~**BA-226**~~

Formerly known as: **BA-226**

Last approved: 11/07/23 4:59 am

Last edit: 03/24/25 7:43 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

BA-226:

Business Administration (BA)

Programs referencing this course

BA-226Z:

CC.MARKETING: Marketing

AAS.PROJECTMNGT: Project Management

AS.TBUSINESS: Business (AST)

CC.BUSMANAGEMENT: Business Management

AAS.ACCNTG: Accounting

AAS.BUSINESS: Business

AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU

AAS.ADMINPRO: Administrative Professional

CC.HUMANRESMNGT: Human Resource Management

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:44 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	BA - Business Administration
Course Number	226Z ~~226~~
Department	Business
Division	Arts and Sciences
Course Title	Introduction to Business Law~~I~~

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	

Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Provides a comprehensive overview of U.S. business law, including the legal system, contracts, torts, intellectual property, agency, employment, and business organization forms. Emphasizes practical legal knowledge and explores how laws impact business operations, with a focus on risk management, contract disputes, business formation, and compliance with government regulation. Introduces legal challenges in business through real cases and legal terminology. ~~Includes concepts, principles, and rules of law applicable to business and personal transactions, with emphasis on sources of law, the U.S. Constitution, personal and business torts and crimes, case-based applications, ethics, and consumer contract law.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Discipline Studies

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall/Winter/Spring

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~explain courtroom procedures, Alternative Dispute Resolution, and basic constitutional law origins and foundations;~~
~~2~~	~~prepare case study analyses, applying legal concepts to real and hypothetical situations;~~
~~3~~	~~discuss tort law and criminal law in a personal and a business environment context;~~
~~4~~	~~list and explain the elements of valid contracts including enforceability, breaches, and remedies;~~

	Upon successful completion of this course, students should be able to:
~~5~~	~~describe the emerging area of law in cyberspace, intellectual property, and internet cases.~~
1	describe the U.S. legal system as applied to business including sources of law, the judicial system, and alternative forms of dispute resolution; (CCN)
2	explain the applicability of tort, criminal, and intellectual property law to business; (CCN)
3	identify business organization forms and the responsibilities and liabilities of principals and agents; (CCN)
4	describe the legal requirements for contract formation, enforcement, and defenses, as well as application of the Uniform Commercial Code; (CCN)
5	explain the basic tenets of employment, labor and wage laws related to business. (CCN)

Major Topic Outline

1. Introduction to law and legal reasoning. 2. Courts and alternative dispute resolution. 3. Court procedures. 4. Constitutional authority to regulate business. 5. Ethics and business decision making. 6. Intentional torts. 7. Negligence and strict liability. 8. Intellectual property. 9. Criminal law and cyber crimes. 10. Nature and terminology. 11. Agreement. 12. Consideration. 13. Capacity and legality. 14. Genuineness of assent. 15. The Statute of frauds. 16. Third party rights. 17. Performance and discharge. 18. Breach of contract and remedies.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment	No
Supports Green Services	No
Percent of Course	0

Course Transferability

Please attach documentation

Reviewer Comments

Key: 301

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 7:21 am

Viewing: **BI-221Z** ~~**BI-211**~~ **: Principles of Biology: Cells** ~~**General Biology for Science Majors (Cellular Biology)**~~

Also listed as: ~~**BI-211**~~

Formerly known as: **BI-211**

Last approved: 04/09/24 3:19 am

Last edit: 03/24/25 11:45 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

BI-211:

Biology (BI)

Programs referencing this course

BI-221Z:

AS.OSUINDENG: AS, Industrial Engineering, OSU
AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU
AS.PSUMUSIC: AS, Music, PSU
AS.TBIOLOGY: Biology (AST)
AS.OSUBIOLOGY: AS, Biology, OSU
AAS.NURSING: Nursing (RN)
NA.OTM: Oregon Transfer Module
AS.PSUBIOLOGY: AS, Biology, PSU
AS.UOBIOLOGY: AS, Biology, UofO
AS.OSUARCHENGR: AS, Architectural Engineering, OSU
AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST)
AS.TBUSINESS: Business (AST)
NA.CTM: Core Transfer Map
AS.OSUCHEMENGR: AS, Chemical Engineering, OSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:44 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Oct 30, 2023 by Megan Feagles (megan.feagles)
2. Apr 9, 2024 by Megan Feagles (megan.feagles)

AS.OSUCIVILENGR: AS, Civil Engineering, OSU
AS.PSUCOMPSCI: AS, Computer Science, PSU
AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU
AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU
AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT)
AA.OTELEMED: Elementary Education (AAOT)
AGS.GENERAL: Associate of General Studies
AA.ENGLIT: English Literature (AAT)
AS.OSUENVIRENGR: AS, Environmental Engineering, OSU
AS.OSUGENHORT: AS, Horticulture, OSU

Justification for this

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact

Course Prefix	BI - Biology
Course Number	221Z ~~211~~
Department	Science
Division	Arts and Sciences
Course Title	Principles of Biology: Cells ~~General Biology for Science Majors (Cellular Biology)~~

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes

Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	5.00
Variable Credit	No
Max Credit	

Variable Credit

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Explores fundamental biological concepts and theories about the cellular and molecular basis of life including cell structure and function, metabolism, genetic basis of inheritance and how information flows from DNA to proteins, with a focus on the iterative process of science. Intended for science majors. ~~The first term of a three-term laboratory course sequence for science majors and pre-professional students. The course emphasizes cellular biology; including the process of science, cell structure, organization and function, cellular communication, biochemical processes, DNA cell cycle, protein synthesis, biotechnology, genetics, evolution, and an introduction to tissues, organs and organ systems.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Elective Only

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be

Course Requisites

Required

Prerequisites

MTH-111Z or placement in MTH-112Z

Corequisites

BI-221LZ ~~BI-211L~~

Prerequisites or Corequisites

CH-104, or CH-221Z and CH-227Z ~~CH-104 or CH-221~~

Recommended

Prerequisites

WRD-098 or placement in WR-121Z

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

Yes

Course Certifications

Is this a Related Instruction course?

No

Related Instruction

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~demonstrate the ability to communicate and comprehend complex scientific principles and concepts important to an understanding of major topics in cellular biology and their role in shaping current scientific knowledge; (WR1)(SP1)(SP2)~~
~~2~~	~~critically examine, evaluate and apply existing and alternative explanations to the key concepts of cellular biology, genetics, epigenetics and evolution in solutions to everyday problems and the consequences for society; (SC1)(SC3)(CL1)(AL2)~~
~~3~~	~~demonstrate an ability to identify scientific resources, gather scientific information, critically evaluate information resources, apply them to research, and generate further questions; (SC2)~~
~~4~~	~~use laboratory equipment, including but not limited to PCR thermal cycler, electrophoresis apparatus, and electronic resources in the pursuit of scientific inquiry; (SC2)~~
~~5~~	~~critically analyze and apply scientific data, mathematics and technology to accurately analyze, interpret, validate and communicate solutions to solve~~

	Upon successful completion of this course, students should be able to:
	~~scientific problems and test hypotheses; (SC1)(SC2)(MA1)(MA2)~~
~~6~~	~~assess the strengths & weaknesses of evidence in support of specific case studies in cellular biology, genetics, epigenetics and evolution. (SC3)~~
1	apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding; (CCN)
2	use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society; (CCN)
3	describe the structure and related functions of major classes of biomolecules; (CCN)
4	differentiate cell components and their functions, emphasizing them as a system of interacting parts; (CCN)
5	compare and contrast anabolic (photosynthesis) and catabolic (respiration and fermentation) pathways emphasizing the transformation of energy and matter; (CCN)
6	articulate how cells store, use, and transmit genetic information; (CCN)
7	explain how mutation and genetic recombination contribute to phenotypic variation and evolution. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

P

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

P

Respond to the needs of diverse audiences and contexts.

P

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

P

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

P

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative pr

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand huma

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

S

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

S

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

S

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Portfolios
Presentations
Projects
Rubrics
Thesis/Research Project
Writing Assignments

Other Assessment Tools

Major Topic Outline

1. Scientific methodology & measurements, water and pH. a. Examination of the processes of science including hypotheses, experimental design, repeatability and scientific theory. b. Application of the microscope, preparation of materials for investigation, the metric system, graphing, data analysis & measurement in science. c. Structure and properties of water, including hydrogen bonding and polarity. d. Explore the significance of water and its properties for living organisms & the environment. e. Practical application of pH, buffers and their effects on living organisms. 2. Biological molecules, enzyme activity and energy. a. Integrate the concepts of the importance of the monomers and polymers of carbohydrates, proteins, lipids and nucleic acids to living systems including the assembly and disassembly of polymers. b. Examine the process of metabolism including the catalytic nature of proteins (enzymes), enzyme shape, specificity related to its active site and the factors that affect enzyme activity. c. Explore ATP and its function and formation by cellular respiration. 3. Cell Structure and function, cell membrane structure and function and cellular communication. a. Apply the cell theory and the characteristics of life to cell types, structure and functions of cells, viruses and prions. b. Examine the theory of Endosymbiosis and critically evaluate the evidence. c. Explore the structure and function of the cell membrane including the transport of various substances across the membrane. d. Evaluate how cells send and receive signals for cellular communication including both intracellular and intercellular communication. 4. DNA synthesis, mutation, repair, cell cycle and cancer. a. Apply the concepts of the process of DNA synthesis, proofreading, mutations and how they might be repaired. b. Examine the cell cycle and the life of a cell including the factors leading to cell division. c. Critical examination of cancer and the involvement of the cell cycle. d. A comparison of binary fission and mitosis. 5. Transcription, translation and the control of gene expression and metabolic pathways. a. Explore the biological concept of a gene including the historical background that led to the concept. b. Integrate the concepts of the process of transcription and translation and a comparison of eukaryotic and prokaryotic factors involved in these processes. c. Examine the function of metabolic pathways and factors affecting their expression. d. Apply biological concepts to controlling gene expression and evaluate prokaryotic and eukaryotic control of gene expression. 6. Genetics of viruses and prokaryotes. a. Examine the viral genome, its replication

via host cells and how viruses obtain variations or new genetic information. b. Evaluate the evidence for processes occurring in prokaryotes that result in the addition of new genetic information, including conjugation, transformation, transduction and the horizontal (lateral) transfer of genetic information. 7. Meiosis and inheritance of genetic traits within living organisms, genomes and proteonomics. a. Integrate the concepts of meiosis and the factors involve in the formation of gametes. b. Exploration of the role of meiosis in genetic diversity within populations c. Relationships of the formation of zygotes to their genotype and phenotype. d. Examine genetic inheritance mechanisms for simple and complex traits. e. Evaluation of epigenetic evidence and its relationship to genetic inheritance patterns. f. Analyze gene sequencing and the interpretation of genomes and proteonomes of both prokaryotes and eukaryotes and the uses of genomic and proteonomic information. 8. DNA technology and genetic engineering. a. Practical applications of DNA technology to solve problems and make evidence based decisions, including cloning, recombinant DNA and genetic modification of organisms. b. Practical applications of DNA technology and genetic engineering in pharmaceuticals and gene therapy for the cure of diseases and agricultural applications. c. Explore the benefits,risks and regulations involved with transgenic or genetically modified organisms (GMOs). 9. Darwinism, evidence of evolution by natural selection and population genetics. a. Integrate Darwin's evidence and modern evidence for evolution by natural selection. b. Apply the concepts of natural and artificial selection using heritable variation and differential success in antibiotic resistant strains of bacteria and diseases in populations. c. Evaluate the processes that occur in the evolution of populations including the Hardy-Weinberg principles. 10. The interrelationship between cells, tissues, organs and organ systems and their functions. 11. Practical application for designing experiments and writing laboratory reports.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

How does it transfer?

general elective
required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

How does it transfer?

general elective
required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

UO - University of Oregon

Comparable
course(s)

How does it transfer?

general elective
required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

Please attach documentation

Reviewer Comments

Key: 344

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 7:20 am

Viewing: **BI-222Z** ~~**BI-212**~~ : **Principles of Biology: Organisms**

~~**General Biology for Science Majors (Animal Biology)**~~

Also listed as: ~~**BI-212**~~

Formerly known as: **BI-212**

Last approved: 04/09/24 3:19 am

Last edit: 03/24/25 11:49 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	**BI-212:** Biology (BI)
Programs referencing this course	**BI-212:** AA.ENGLIT: English Literature (AAT) **BI-222Z:** AS.OSUINDENG: AS, Industrial Engineering, OSU AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.PSUMUSIC: AS, Music, PSU AS.TBIOLOGY: Biology (AST) AS.OSUBIOLOGY: AS, Biology, OSU NA.OTM: Oregon Transfer Module AS.PSUBIOLOGY: AS, Biology, PSU AS.UOBIOLOGY: AS, Biology, UofO AS.OSUARCHENGR: AS, Architectural Engineering, OSU AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST) AS.TBUSINESS: Business (AST) NA.CTM: Core Transfer Map AS.OSUCHEMENGR: AS, Chemical Engineering, OSU AS.OSUCIVILENGR: AS, Civil Engineering, OSU AS.PSUCOMPSCI: AS, Computer Science, PSU AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AA.OTELEMED: Elementary Education (AAOT) AGS.GENERAL: Associate of General Studies AA.ENGLIT: English Literature (AAT) AS.OSUENVIRENGR: AS, Environmental Engineering, OSU AS.OSUGENHORT: AS, Horticulture, OSU

Justification for this inactivation request

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:44 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Oct 30, 2023 by Megan Feagles (megan.feagles)
2. Apr 9, 2024 by Megan Feagles (megan.feagles)

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email

Course Prefix	BI - Biology
Course Number	222Z ~~212~~
Department	Science
Division	Arts and Sciences
Course Title	Principles of Biology: Organisms ~~General Biology for Science Majors (Animal Biology)~~

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	5.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	

Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-clas and out-of-class activity.

Course Description

Explores fundamental biological concepts and theories about the structure and function of diverse organisms (including plants and animals), evolution and development, transformation of energy and matter, and body systems at a multicellular organismal level. Intended for science majors. ~~This course is the second quarter of a three-quarter sequence of a laboratory course for science majors and pre-professional students. It emphasizes an evolutionary approach to animal biology; including animal diversity, development and the effects of Hox genes and hormones, comparisons of animal body systems including human, homeostasis and behavior.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Foundational Requirement

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites

Corequisites BI-222LZ ~~BI-212L~~

Prerequisites or Corequisites

CH-105, or CH-222Z and CH-228Z ~~CH-105 or CH-222~~

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Winter

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~demonstrate the ability to communicate and comprehend complex scientific principles and concepts important to an understanding of major topics in animal biology and their role in shaping current scientific knowledge; (WR1)(SP1)(SP2)~~
~~2~~	~~critically examine, evaluate and apply existing and alternative explanations to the key concepts of animal biology to everyday problems and the consequences for society; (SC1)(SC3)(CL1)(AL2)~~
~~3~~	~~demonstrate an ability to identify scientific resources, gather scientific information, critically evaluate information resources, apply them to research, and generate further questions; (SC2)~~
~~4~~	~~display the use of laboratory equipment and electronic resources in the pursuit of scientific inquiry; (SC2)~~
~~5~~	~~critically analyze and apply scientific data, mathematics and technology to accurately analyze, interpret, validate and communicate solutions to solve scientific problems and test hypotheses; (SC1)(SC2)(MA1)(MA2)~~
~~6~~	~~assess the strengths & weaknesses of evidence in support of specific case studies in animal biology that explore animal adaptations to their environments. (SC3)~~
1	apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding; (CCN)
2	use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society; (CCN)
3	explain how morphology relates to physiology across diverse organisms; (CCN)
4	describe how biological systems detect and respond to different internal/external environmental conditions through feedback; (CCN)
5	compare and contrast strategies for achieving homeostasis; (CCN)

	Upon successful completion of this course, students should be able to:
6	explain how developmental and environmental processes influence the evolution of structures, functions, and life cycles across diverse organisms. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.	P
Locate, evaluate, and ethically utilize information to communicate effectively.	P
Demonstrate appropriate reasoning in response to complex issues.	

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.	P
Respond to the needs of diverse audiences and contexts.	P
Build and manage relationships.	

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.	P
Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.	P

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.	S

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.	S
Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.	S

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Multiple Choice Test
Presentations
Projects
Rubrics
Thesis/Research Project
Writing Assignments

Other Assessment Tools

Major Topic Outline

1. Development, animal form and function. a. Fate of cells, the unifying processes, and the variability that is seen in development. b. Key principles of multi-cellularity, including cell shape and size in relation to surface area to volume ratios. c. Cellular communication within a multicellular organism. d. Stem cells and differentiation in embryonic development, the formation and function of animal tissues including the roles of Hox genes. e. Unity and diversity among animal tissues and organ systems. 2. Homeostasis and chemical control of the animal body. a. How animals maintain homeostasis using feedback loops, surface area to volume ratios and environmental relationships. b. Endocrine system, where it is located, the general role of hormones and how chemical signals coordinate cellular activity and homeostasis in the animal body. 3. Function of electrical signals in animals. a. The components of the nervous system, including a survey of the variation in animals. b. The action potential and the movement of ions in the formation. c. How an impulse passes from one neuron to the next across synaptic gaps using neurotransmitter chemicals. d. The role of neurotransmitters in the body and the effects of drugs and toxins on them. 4. The vertebrate nervous system, the senses and how they interact with sensory and movement. a. The relationships of structure and function of the nervous system, including the central nervous system, the peripheral nervous system and the autonomic nervous system. b. Examine how the sensory organs convey information to the brain and how this information is processed. c. How sensations are processed, formation of memories and the research into diseases. d. An analysis and comparison of reflexes and reactions in response to environmental changes. e. How muscles and bones interact to cause movement in response to sensory stimuli. 5. Acquiring nutrients and gases from the environment and transporting them to the cells of the animal body. a. Types of animal digestive tracts, the nutritional needs of animals and how they acquire what their bodies need, including digestion, absorption, assimilation and the interaction of the nervous and endocrine systems. b. Adaptations for efficiencies in digestion, absorption and assimilation of nutrients. c. Types of animal circulatory systems, the relationship of the blood, tissue fluid and cytoplasm in delivering nutrients and gases to the cells and disposing of cellular wastes. d. Animal respiratory systems, the function of gas exchange, requirements for organismic respiration, and the homeostatic control of respiratory rate. 6. Various ways animals produce ATP energy. a. Aerobic and anaerobic processes in the formation of ATP. b. Locations of various respiratory processes for both eukaryotic and prokaryotic cells. c. Energy production and utilization to

muscle function. 7. How animals stay healthy. a. Non-specific and innate immune responses including the types of cells involved, the inflammatory response and how they function to prevent infection. b. Acquired immune response, the cells involved, and their functions in preventing infections. c. Immune response in infections outside and inside cells. d. The effect of HIV on the immune system. 8. Osmoregulation, excretion and reproduction in animals. a. Structures and processes necessary for the formation of urine. b. Advantages and disadvantages of different types of nitrogenous wastes as adaptations to different habitats. c. Osmoregulation and behavioral adaptations in terrestrial animals in response to habitat changes. d. Structures and processes involved in sexual reproduction. e. Advantages and disadvantages of external versus internal fertilization. f. The role of hormones and feedback loops in reproduction. 9. Behavior and speciation. a. Innate and learned behaviors in animals and their implications for the ethical treatment of animals. b. Role of hormones and feedback loops in behavior. c. The diversity of animals, mechanisms of speciation, and the evolution and extinction of species over time. 10. Classification and animal diversity. a. Hierarchy of categories in animal classification and the distinguishing characteristics of each category. 11. Designing and conduct a long-term experiment, write a major laboratory reports and give a presentation of the lab and its results.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s)

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s)

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s)

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:20 am

Viewing: **BI-223Z ~~BI-213~~ : Principles of Biology: Ecology and Evolution ~~General Biology for Science Majors (Plant Biology & Ecology)~~**

Also listed as: ~~**BI-213**~~

Formerly known as: **BI-213**

Last approved: 04/09/24 3:19 am

Last edit: 03/24/25 11:49 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	**BI-213:** Biology (BI)
Programs referencing this course	**BI-213:** AA.ENGLIT: English Literature (AAT) **BI-223Z:** AS.OSUINDENG: AS, Industrial Engineering, OSU AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.PSUMUSIC: AS, Music, PSU AS.TBIOLOGY: Biology (AST) AS.OSUBIOLOGY: AS, Biology, OSU NA.OTM: Oregon Transfer Module AS.PSUBIOLOGY: AS, Biology, PSU AS.UOBIOLOGY: AS, Biology, UofO AS.OSUARCHENGR: AS, Architectural Engineering, OSU AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST) AS.TBUSINESS: Business (AST) NA.CTM: Core Transfer Map AS.OSUCHEMENGR: AS, Chemical Engineering, OSU AS.OSUCIVILENGR: AS, Civil Engineering, OSU AS.PSUCOMPSCI: AS, Computer Science, PSU AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AA.OTELEMED: Elementary Education (AAOT) AGS.GENERAL: Associate of General Studies AA.ENGLIT: English Literature (AAT) AS.OSUENVIRENGR: AS, Environmental Engineering, OSU AS.OSUGENHORT: AS, Horticulture, OSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:44 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Oct 30, 2023 by Megan Feagles (megan.feagles)
2. Apr 9, 2024 by Megan Feagles (megan.feagles)

Justification for this

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email	
Course Prefix	BI - Biology
Course Number	223Z ~~213~~
Department	Science
Division	Arts and Sciences
Course Title	Principles of Biology: Ecology and Evolution ~~General Biology for Science Majors (Plant Biology & Ecology)~~

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	5.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	

Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Explores the unity and diversity of life through evolutionary mechanisms and relationships, and adaptation to the environment. Examines population, community, and ecosystem ecology. Intended for science majors. ~~This course is the third quarter of a three-quarter sequence of a laboratory course for science majors and pre-professional students. It emphasizes an evolutionary approach to plant biology and ecology; including plant diversity, plant organ systems and their functions, photosynthesis and transpiration, productivity and energy transfer, nutrient cycles, population dynamics, ecosystems and environmental issues.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Foundational Requirement

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be

Course Requisites

Required

Prerequisites

Corequisites BI-223LZ ~~BI-213L~~

Prerequisites or Corequisites

CH-105, or CH-222Z and CH-228Z ~~CH-105 or CH-222~~

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Related Instruction Area

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~demonstrate the ability to communicate and comprehend complex scientific principles and concepts important to an understanding of major topics in plant biology and ecology and their role in shaping current scientific knowledge; (WR1)(SP1)(SP2)~~
~~2~~	~~critically examine, evaluate and apply existing and alternative explanations to the key concepts of plant biology and ecology to everyday problems and the consequences for society; (SC1)(SC3)(CL1)(AL2)~~
~~3~~	~~demonstrate an ability to identify scientific resources, gather scientific information, critically evaluate information resources, apply them to research, and generate further questions; (SC2)~~
~~4~~	~~display the use of laboratory equipment and electronic resources in the pursuit of scientific inquiry; (SC2)~~
~~5~~	~~critically analyze and apply scientific data, mathematics and technology to accurately analyze, interpret, validate and communicate solutions to solve scientific problems and test hypotheses; (SC1)(SC2)(MA1)(MA2)~~
~~6~~	~~assess the strengths & weaknesses of evidence in support of specific case studies in biology and ecology that examine the limitations and consequences of human impact on the survival of populations and the ecosystem. (SC3)~~
1	apply the iterative process of science to generate and answer biological questions by analyzing data and drawing conclusions that are based on empirical evidence and current scientific understanding; (CCN)
2	use evidence to develop informed opinions on contemporary biological issues and explain the implications of those issues on society; (CCN)

	Upon successful completion of this course, students should be able to:
3	provide evidence for phylogenetic relationships which illustrate the unity and diversity of life; (CCN)
4	describe how adaptation, development, mutation, and the environment affect organismal evolution; (CCN)
5	apply mathematical models to describe how populations change through time in relation to biotic and abiotic factors; (CCN)
6	explain how organisms and their environments affect each other across different temporal and spatial scales; (CCN)
7	interpret models explaining the flow of energy and cycling of matter in ecosystems. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.	P
Locate, evaluate, and ethically utilize information to communicate effectively.	P
Demonstrate appropriate reasoning in response to complex issues.	

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.	P
Respond to the needs of diverse audiences and contexts.	P
Build and manage relationships.	

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.	P
Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.	P

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.	
Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.	

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.	S
Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.	S
Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.	S

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Multiple Choice Test
Presentations
Projects
Rubrics
Thesis/Research Project
Writing Assignments

Other Assessment Tools

Major Topic Outline

1. How populations grow - the survival, growth and environmental impact of populations. a. What a population is and the environmental factors that populations cope in determining their fate and reproductive success. b. How distribution and spacing affect populations. c. Factors that determine population size including density-dependent and density-independent factors, resource availability and carrying capacity on the growth of populations. d. Factors affecting the interactions and distributions of populations in communities. e. An analysis of whether human populations are subject to the same environmental factors that regulate the growth of other populations. f. Factors that determine human population demographics including whether countries are growing, stable or declining in size. g. Ecological footprints of different countries and how these indicate effects of human populations in different countries on the availability and use of resources and their impact on the environment. 2. Biodiversity. a. Classification schemes for living organisms and why these are useful. b. Characteristics of various Kingdoms, the organisms found in each and their impacts on ecological systems and human health. c. Explore which organisms that are necessary to maintain earth as a “living planet”. d. The role humans play in stewardship and self-preservation in the biosphere. 3. Origin and diversity of the plant kingdom. a. The evolutionary trends in plant diversity. b. The relationship of plant form and function to the tissues and organs they possess and to the environment that they live in. c. The significance of the co-evolution of plants and their pollinators. 4. Plants and productivity. a. The function of photosynthesis to the formation of energy, biological monomers and the relationships between autotrophs and heterotrophs. b. The processes of photosynthesis and the factors necessary for energy production during photosynthesis. c. The effects of varying CO_2 levels on productivity, plant growth and soil fertility. d. The concepts of

water and nutrient flow through the plant. e. The factors that determine plant distribution and ecosystem stability. 5. Reproduction and nutrition of plants. a. The life cycles of plants and how they influence reproduction in various plant taxa. b. The formation and dispersal of spores and seed in the development of new plants. c. The nutrient requirements of plants, the acquisition of essential nutrients and effects of nutrient deficiencies. d. The concepts of the formation and composition of soil and its nutrient availability to plants. e. The vitality of soils in various ecosystems and the factors that effect nutrient availability in these ecosystems. f. The effects that humans have on soil vitality and productivity under various management scenarios. 6. How plants sense and respond to changes in their environment during growth. a. The sensory, mechanical and chemical pathways that plants use to respond to environmental stimuli. b. Plant hormones, their transport and effects on growth. c. How plant hormones or their synthetic counterparts are used in agriculture to control plant growth and reproduction for the benefit of humans. 7. Species interactions and plant defenses. a. Symbiotic relationships that exist between organisms and the adaptations that are exhibited in each. b. How plants defend themselves against disease and herbivory. c. The metabolic byproducts of plant defenses are used by humans in medicine and recreation. 8. Interactions in communities, ecosystems and biomes. a. Composition of communities, ecosystems and biomes and the factors that affect their make-up. b. Habitats and niches; why no two organisms can occupy the same niche. c. Natural and human-caused disturbances of ecosystems and how communities and ecosystems respond to these through succession. d. Interactions of biotic and abiotic factors in ecosystems. e. Biogeochemical cycles to life and the impacts that biodiversity and human activities have on them. f. Biogeography of species and the impact that alien or exotic species have on biodiversity and the efficiency of the ecosystem. g. Relationship of ocean and air currents to the formation of climate and weather patterns. h. Temperature and precipitation to productivity, biodiversity and biome distribution. 9. Biodiversity, conservation and extinction. a. Factors that affect extinction and extinction rate, including human activity. b. Benefits humans receive from and the biological value of biodiversity. c. Conservation and how conservation priorities are set for species and for habitats, including umbrella and keystone species. d. Reasons humans are presently unable to repair or replicate the natural environment and the stumbling blocks we encounter during restoration efforts. 10. Human population for a country, its dynamics and demography as well as the ecosystems and biodiversity found in the country and the impact that the human population has on these. 11. Design and conduct a long-term experiment, write a major laboratory report and give a presentation of the lab and its results.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course	0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s): BI213

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s): BI213

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s): BI213

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s): BI213

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s) BI213

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s) BI213

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s) BI213

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s) BI213

How does it transfer?

required or support for major

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)

Please attach documentation

Reviewer Comments

Key: 348

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 03/24/25 11:56 am

Viewing: CH-221Z : General Chemistry I

Last edit: 03/26/25 9:18 am

Changes proposed by: Megan Feagles (megan.feagles)

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	221Z
Department	Science
Division	Arts and Sciences
Course Title	General Chemistry I

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 12:02 pm Megan Feagles (megan.feagles): Approved for Curriculum Office

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	33.00
Lec/Lab	

Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Explores and applies principles and applications of chemistry. Emphasis on measurement, components of matter, atomic and molecular structure, quantitative relationships including foundational stoichiometry, and major classes of chemical reactions. CH-221Z is a lecture course; CH-227Z is the laboratory component.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Discipline Studies

Reason for the Proposal

Common Course Numbering

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

CH-104 and CH-105, or CH-150, with a C or better; or a year of high school chemistry within five academic years of beginning CH-221Z (passed all terms with C or higher)

Corequisites

CH-227Z and CH-221SZ

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall/Winter

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	describe the phases and classifications of matter and differentiate between physical and chemical properties; (CCN)
2	represent physical measurements using SI and derived units and demonstrate systematic problem-solving including unit conversion; (CCN)
3	use the periodic table to solve problems in chemistry; (CCN)
4	describe the principles of electromagnetic energy, the Bohr model and quantum theory, and use electron configurations to identify periodic variations in chemical properties; (CCN)
5	interpret and apply ionic and covalent bonding theories including Lewis structures, formal charges, resonance, molecular structure, and polarity; (CCN)
6	quantify the composition of substances and solutions; (CCN)
7	identify and name a variety of elements, ions, ionic compounds, and covalent compounds; (CCN)
8	write, balance, and classify chemical reactions and solve foundational stoichiometry calculations. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

Major Topic Outline

Green Course Management

Course Change Request

New Course Proposal

Date Submitted: 03/24/25 11:57 am

Viewing: CH-222Z : General Chemistry II

Last edit: 04/01/25 12:12 pm

Changes proposed by: Megan Feagles (megan.feagles)

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	222Z
Department	Science
Division	Arts and Sciences

Course Title

General Chemistry II

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 12:02 pm Megan Feagles (megan.feagles): Approved for Curriculum Office
2. 04/01/25 10:38 am Megan Feagles (megan.feagles): Approved for Curriculum Committee Approval
3. 04/01/25 12:29 pm Megan Feagles (megan.feagles): Rollback to Curriculum Committee Approval for Colleague

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes

Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Explores and applies principles presented in CH-221Z to the study of the solid, liquid, and gaseous states of matter. Principles of stoichiometry, thermochemistry, kinetics, and foundational equilibrium are explored and applied to the study of aqueous and gas-phase chemical reactions. CH-222Z is a lecture course; CH-228Z is the laboratory component.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Discipline Studies

Reason for the Proposal

Common Course Numbering

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

CH-221Z with a C or better

Corequisites

CH-228Z and CH-222SZ

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule

Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Winter/Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	apply stoichiometry to a variety of problems involving reactions, gases, liquids, solutions, thermochemistry, kinetics, and equilibrium expressions; (CCN)
2	apply kinetic molecular theory and gas laws to predict the behavior of gases at various conditions; (CCN)
3	identify types of intermolecular forces and apply them to physical properties of solids, liquids, and solutions; (CCN)
4	describe solution concepts and factors affecting solution properties; (CCN)
5	determine the effects of different factors on chemical reaction rates and examine the role of catalysis in modifying these rates; (CCN)
6	apply concepts of thermochemistry to explain thermal energy transfer and the energy changes that accompany chemical and physical changes; (CCN)
7	identify and apply appropriate equations related to gas laws, solutions, colligative properties, thermochemistry, kinetics, and equilibrium expressions. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Course Change Request

New Course Proposal

Date Submitted: 03/24/25 11:57 am

Viewing: CH-223Z : General Chemistry III

Last edit: 04/01/25 12:20 pm

Changes proposed by: Megan Feagles (megan.feagles)

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	223Z
Department	Science
Division	Arts and Sciences

Course Title

General Chemistry III

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 12:02 pm Megan Feagles (megan.feagles): Approved for Curriculum Office
2. 04/01/25 10:46 am Megan Feagles (megan.feagles): Approved for Curriculum Committee Approval
3. 04/01/25 12:29 pm Megan Feagles (megan.feagles): Rollback to Curriculum Committee Approval for Colleague

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes

Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Builds upon the principles presented in CH-222Z, explores thermodynamics and chemical equilibrium, and applies them to the study of aqueous acid-base reactions, solubility, and electrochemistry. CH-223Z is a lecture course; CH-229Z is the laboratory component.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Discipline Studies

Reason for the Proposal

Common Course Numbering

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

CH-222Z with a C or better

Corequisites

CH-229Z and CH-223SZ

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Spring/Summer

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	apply concepts of thermodynamics to explain the favorability of chemical reactions; (CCN)
2	apply the principles of spontaneity, entropy, free energy, and the laws of thermodynamics to predict and rationalize the behavior of chemical reactions; (CCN)
3	interpret the behavior and relative strengths of acids and bases, buffers, and the hydrolysis of salts; (CCN)
4	analyze and evaluate equilibrium reactions including solubility, acids and bases, and other equilibria; (CCN)
5	predict responses of various chemical systems to changing conditions using equilibrium calculations and Le Chatelier's Principle; (CCN)
6	use redox reactions and electrochemical principles to determine cell potentials and to analyze the relationship between voltage, free energy, and equilibrium; (CCN)
7	identify or formulate and apply the appropriate equations related to electrochemistry, thermodynamics, equilibrium reactions, acids, bases, and buffers. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Key: 4528

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 03/24/25 11:58 am

Viewing: **CH-227Z : General Chemistry I Laboratory**

Last edit: 04/01/25 10:24 am

Changes proposed by: Megan Feagles (megan.feagles)

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	227Z
Department	Science
Division	Arts and Sciences

Course Title

General Chemistry I Laboratory

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 12:02 pm Megan Feagles (megan.feagles): Approved for Curriculum Office
2. 04/01/25 10:27 am Megan Feagles (megan.feagles): Approved for Curriculum Committee Approval
3. 04/01/25 12:29 pm Megan Feagles (megan.feagles): Rollback to Curriculum Committee Approval for Colleague

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes

Only Pass/No Pass	No
Audit	Yes
Min Credit	1.00
Variable Credit	No

Contact hours

Lecture	
Lec/Lab	
Lab	33.00
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Experiments correspond to the topics covered in CH-221Z including the fundamentals of chemical measurements, quantitative relationships in chemical analysis, and understanding atomic and molecular structure. CH-227Z is the laboratory component; CH-221Z is the lecture course.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Reason for the Proposal

Common Course Numbering

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

CH-221Z and CH-221SZ

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall/Winter

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	follow standard safety procedures while working with chemicals and equipment in a laboratory setting; (CCN)
2	keep an accurate and detailed laboratory record; (CCN)
3	measure, calculate, and report data and results using proper units and appropriate measures of uncertainty; (CCN)
4	analyze experimental results qualitatively and quantitatively with measures of accuracy and precision; (CCN)
5	interpret and communicate the results of experiments applying chemical concepts in CH-221Z in a clear and concise manner; (CCN)
6	investigate chemical concepts in CH-221Z qualitatively and quantitatively using scientific methods. (CCN)

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Key: 4525

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 03/24/25 11:57 am

Viewing: **CH-228Z : General Chemistry II Laboratory**

Last edit: 04/01/25 12:20 pm

Changes proposed by: Megan Feagles (megan.feagles)

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	228Z
Department	Science
Division	Arts and Sciences

Course Title

General Chemistry II Laboratory

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 12:02 pm Megan Feagles (megan.feagles): Approved for Curriculum Office
2. 04/01/25 10:38 am Megan Feagles (megan.feagles): Approved for Curriculum Committee Approval
3. 04/01/25 12:29 pm Megan Feagles (megan.feagles): Rollback to Curriculum Committee Approval for Colleague

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes

Only Pass/No Pass	No
Audit	Yes
Min Credit	1.00
Variable Credit	No

Contact hours

Lecture	
Lec/Lab	
Lab	33.00
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Experiments correspond to the topics covered in CH-222Z including the fundamentals of intermolecular interactions, stoichiometric relationships, chemical equilibria and their application to the synthesis, identification, and analysis of chemical compounds. CH-228Z is the laboratory component; CH-222Z is the lecture course.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Discipline Studies

Reason for the Proposal

Common Course Numbering

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

CH-221Z or CH-227Z with a C or better

Corequisites

CH-222Z and CH-222SZ

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Winter/Spring

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	follow standard safety procedures while working with chemicals and equipment in a laboratory setting; (CCN)
2	keep an accurate and detailed laboratory record; (CCN)
3	measure, calculate, and report data and results using proper units and appropriate measures of uncertainty; (CCN)
4	analyze experimental results qualitatively and quantitatively with measures of accuracy and precision; (CCN)
5	interpret and communicate the results of experiments applying chemical concepts in CH-222Z in a clear and concise manner; (CCN)
6	investigate chemical concepts in CH-222Z qualitatively and quantitatively using scientific methods. (CCN)

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Key: 4527

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 03/24/25 11:58 am

Viewing: **CH-229Z : General Chemistry III Laboratory**

Last edit: 04/01/25 12:24 pm

Changes proposed by: Megan Feagles (megan.feagles)

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	229Z
Department	Science
Division	Arts and Sciences

Course Title

General Chemistry III Laboratory

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 12:02 pm Megan Feagles (megan.feagles): Approved for Curriculum Office
2. 04/01/25 10:46 am Megan Feagles (megan.feagles): Approved for Curriculum Committee Approval
3. 04/01/25 12:29 pm Megan Feagles (megan.feagles): Rollback to Curriculum Committee Approval for Colleague

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes

Only Pass/No Pass	No
Audit	Yes
Min Credit	1.00
Variable Credit	No

Contact hours

Lecture	
Lec/Lab	
Lab	33.00
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Experiments correspond to the topics covered in CH-223Z including the principles of chemical equilibria and their application to chemical analysis using volumetric and electrochemical methods. CH-229Z is the laboratory component; CH-223Z is the lecture course.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Elective Only

Reason for the Proposal

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

CH-222Z or CH-228Z with a C or better

Corequisites

CH-223Z and CH-223SZ

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Spring/Summer

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	follow standard safety procedures while working with chemicals and equipment in a laboratory setting; (CCN)
2	keep an accurate and detailed laboratory record; (CCN)
3	measure, calculate, and report data and results using proper units and appropriate measures of uncertainty; (CCN)
4	analyze experimental results qualitatively and quantitatively with measures of accuracy and precision; (CCN)
5	interpret and communicate the results of experiments applying chemical concepts in CH-223Z in a clear and concise manner; (CCN)
6	investigate chemical concepts in CH-223Z qualitatively and quantitatively using scientific methods; (CCN)

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course	0

Course Transferability

Please attach documentation

Reviewer Comments

Key: 4529

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 7:35 am

Viewing: **EC-201Z** ~~**EC-201**~~ **: Principles of Microeconomics**

~~**Economics: Micro**~~

Also listed as: ~~**EC-201**~~

Formerly known as: **EC-201**

Last approved: 10/30/23 4:51 am

Last edit: 03/24/25 7:35 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	**EC-201:** Economics (EC)
Programs referencing this course	**EC-201:** CC.ACNTGCLERK: Accounting Clerk AS.OSUINDENG: AS, Industrial Engineering, OSU AS.OSUBIOLENGR: AS, Biological Engineering, OSU AS.OITMECHENGR: AS, Mechanical Engineering, OIT AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.PSUMUSIC: AS, Music, PSU AS.TBIOLOGY: Biology (AST) AS.OSUBIOLOGY: AS, Biology, OSU NA.OTM: Oregon Transfer Module AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT AS.OSUARCHENGR: AS, Architectural Engineering, OSU AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST) AS.TBUSINESS: Business (AST) NA.CTM: Core Transfer Map AAS.ACCNTG: Accounting AAS.BUSINESS: Business AS.OSUCHEMENGR: AS, Chemical Engineering, OSU AS.OSUCIVILENGR: AS, Civil Engineering, OSU AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AS.PSUENGLISH: AS, English, PSU AGS.GENERAL: Associate of General Studies AA.ENGLIT: English Literature (AAT) AS.OSUENVIRENGR: AS, Environmental Engineering, OSU AS.OSUGENHORT: AS, Horticulture, OSU

Justification for this inactivation request

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:45 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Oct 30, 2023 by Megan Feagles (megan.feagles)

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email	
Course Prefix	EC - Economics
Course Number	201Z ~~201~~
Department	Social Sciences
Division	Arts and Sciences
Course Title	Principles of Microeconomics ~~Economics: Micro~~

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	4.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	

CWE Seminar

CPR

Seminar

Community Education/Drivers Ed

Community Education/Adult

Total 44

Proposed Effective Term Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Examines how consumers and firms make choices when facing scarce resources, and how those choices are related to government policy and market outcomes, such as prices and output. ~~Focuses on microeconomic theory dealing with the behavior of individuals and profit-maximizing firms in market structures with varying degrees of competition. Coverage includes price theory, international trade, consumer behavior, the theory of the firm, and the potential role of government in affecting market outcomes.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites MTH-020 or placement in MTH-098

Corequisites

Prerequisites or Corequisites
WRD-098 or placement in WR-121Z

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?
No

Show course in Schedule: Print in Schedule

Hide course in catalog
No

When do you plan to offer this course?
Summer/Fall/Winter/Spring

Will this class use library resources?
No

Have you talked with a librarian regarding that impact?

Course Certifications

Is this a Related Instruction course?
No

Related Instruction Area

Are you going to seek General Education Certification after course approval?
Yes

General Education Outcome(s)

Social Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~demonstrate understanding of basic vocabulary and mechanics of microeconomics; (SS1)(SS2)~~
~~2~~	~~evaluate impact of different factors on consumer and producer decisions; (SS1)(SS2)~~
~~3~~	~~perform equilibrium and comparative static analysis within markets; (SS1)(SS2)~~
~~4~~	~~use microeconomic analysis to explain issues of trade between individuals, groups and geographic regions; (SS1)(SS2)~~
~~5~~	~~apply the concepts of microeconomics to improve their understanding of economic policies regarding issues of public expenditure and taxation; (SS1)(SS2)~~
~~6~~	~~analyze economic social phenomena by evaluating information, evidence, argument and/or theory to draw logical conclusions or implications. (SS1)~~
1	articulate the concepts of opportunity costs and trade-offs; (CCN)
2	explain producer and consumer behavior using economic models; (CCN)
3	analyze the relationship between supply and demand and its applications across various economic contexts; (CCN)
4	identify the impact of market failures and government policy on efficiency and welfare. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.	P
Locate, evaluate, and ethically utilize information to communicate effectively.	
Demonstrate appropriate reasoning in response to complex issues.	P

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.	S
Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.	S

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

- General Examination
- Multiple Choice Test
- Standardized Testing
- Writing Assignments

Other Assessment Tools

Major Topic Outline	1. Supply and demand. 2. Taxes and other market interventions. 3. Public goods and externalities. 4. International trade and trade policy. 5. Production costs and output decisions. 6. Individual choice and consumption decisions. 7. Market structures and regulations.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

How does it transfer?

general education or distribution requirement

general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

How does it transfer?

general education or distribution requirement

general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

How does it transfer?

general education or distribution requirement

general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

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Please attach documentation

Course Change Request

Date Submitted: 03/24/25 7:36 am

Viewing: **EC-202Z** ~~**EC-202**~~ **: Principles of Macroeconomics**

~~**Economics: Macro**~~

Also listed as: ~~**EC-202**~~

Formerly known as: **EC-202**

Last approved: 10/30/23 4:51 am

Last edit: 03/24/25 7:36 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	**EC-202:** Economics (EC)
Programs referencing this course	**EC-202:** AS.OSUINDENG: AS, Industrial Engineering, OSU AS.OSUBIOLENGR: AS, Biological Engineering, OSU AS.OITMECHENGR: AS, Mechanical Engineering, OIT AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.PSUMUSIC: AS, Music, PSU AS.TBIOLOGY: Biology (AST) AS.OSUBIOLOGY: AS, Biology, OSU NA.OTM: Oregon Transfer Module AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST) AS.TBUSINESS: Business (AST) NA.CTM: Core Transfer Map AAS.BUSINESS: Business AS.OSUCHEMENGR: AS, Chemical Engineering, OSU AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AS.PSUENGLISH: AS, English, PSU AGS.GENERAL: Associate of General Studies AA.ENGLIT: English Literature (AAT) AS.OSUENVIRENGR: AS, Environmental Engineering, OSU

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:45 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Oct 30, 2023 by Megan Feagles (megan.feagles)

Are you the Faculty Contact Person?

Faculty Contact Email	
Course Prefix	EC - Economics
Course Number	202Z ~~202~~
Department	Social Sciences
Division	Arts and Sciences
Course Title	Principles of Macroeconomics ~~Economics: Macro~~

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	4.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	

Community Education/Adult

Total 44

Proposed Effective Term Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Examines the aggregate activity of a market economy, economic growth, inflation, unemployment, and the use of fiscal and monetary policy to address macroeconomic problems. ~~Introduction to economic theory, policy, and institutions. Focuses on macroeconomic theory, money, unemployment, inflation, fiscal and monetary policies, international finance, and economic growth.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites MTH-020 or placement in MTH-050 or MTH-060

Corequisites

Prerequisites or Corequisites

WRD-098 or placement in WR-121Z

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Summer/Fall/Winter/Spring

Will this class use library resources?

No

Have you talked with a librarian regarding that impact?

Course Certifications

Is this a Related Instruction course?

No

Related Instruction Area

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Social Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~demonstrate comprehension of basic concepts of macroeconomic theory; (SS1) (SS2)~~
~~2~~	~~dissect the main factors affecting the macroeconomy and relate these factors to their individual lives; (SS1)(SS2)~~
~~3~~	~~perform macroeconomic analysis using aggregate demand and aggregate supply to determine impact of fiscal and monetary policy initiatives designed to rectify undesirable macro outcomes; (SS1)(SS2)~~
~~4~~	~~apply macroeconomic analysis to the impacts of domestic changes in the macroeconomy on their personal financial decisions as well as public financial issues; (SS1)(SS2)~~
~~5~~	~~analyze economic phenomena by evaluating information, evidence, arguments and/or theory to draw logical conclusions or implications. (SS1)~~
1	interpret basic macroeconomic indicators including GDP, unemployment, and inflation; (CCN)
2	identify the determinants of economic growth; (CCN)
3	apply economic models to explain macroeconomic outcome; (CCN)
4	compare fiscal and monetary policy tools, and their uses and economic impacts. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.	P
Locate, evaluate, and ethically utilize information to communicate effectively.	
Demonstrate appropriate reasoning in response to complex issues.	P

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.	S
Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.	S

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Multiple Choice Test
Standardized Testing
Writing Assignments

Other Assessment Tools

Major Topic Outline: 1. Supply and demand. 2. The aggregate economy and business cycles. 3. Fiscal policy: the role of government in the economy. 4. Banks, money, and financial markets. 5. Monetary policy and the Federal Reserve. 6. Inflation and unemployment. 7. Economic growth.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

How does it transfer?

general education or distribution requirement

general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

How does it transfer?

general education or distribution requirement

general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s)

How does it transfer?

general education or distribution requirement

general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

---

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s)

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Used General Education Search links for all State universities in Oregon

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Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:26 am

Viewing: **MTH-251Z** ~~**MTH-251**~~ **: Differential Calculus**~~**I**~~

Also listed as: ~~**MTH-251**~~

Formerly known as: **MTH-251**

Last approved: 09/30/23 4:41 am

Last edit: 03/24/25 7:26 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	**MTH-251:** Computer Science (CS) Math Course Pathways and Prerequisites Mathematics (MTH) Physics (PH) **MTH-251Z:** Associate of Science Degrees (AS)
Programs referencing this course	**MTH-251Z:** AS.OSUINDENG: AS, Industrial Engineering, OSU AS.OSUBIOLENGR: AS, Biological Engineering, OSU AS.OITMECHENGR: AS, Mechanical Engineering, OIT AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.PSUMECHENGR: AS, Mechanical Engineering, PSU AS.PSUMUSIC: AS, Music, PSU AS.TBIOLOGY: Biology (AST) AS.OSUBIOLOGY: AS, Biology, OSU NA.OTM: Oregon Transfer Module AS.PSUBIOLOGY: AS, Biology, PSU AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT AS.UOBIOLOGY: AS, Biology, UofO AS.OSUARCHENGR: AS, Architectural Engineering, OSU AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST) AS.TBUSINESS: Business (AST) NA.CTM: Core Transfer Map AS.OSUCHEMENGR: AS, Chemical Engineering, OSU AS.OSUCIVILENGR: AS, Civil Engineering, OSU AS.PSUCIVILENGR: AS, Civil Engineering, PSU AS.PSUCOMPENGR: AS, Computer Engineering, PSU AS.PSUCOMPSCI: AS, Computer Science, PSU AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU AS.OSUECOLENGR: AS, Ecological Engineering, OSU AS.OITELECENGR: AS, Electrical Engineering, OIT AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AS.PSUELECTENGR: AS, Electrical Engineering, PSU AAS.ELECTRONENGTECH: Electronics Engineering Technology AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AS.PSUENGLISH: AS, English, PSU AGS.GENERAL: Associate of General Studies

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:45 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Sep 30, 2023 by Megan Feagles (megan.feagles)

AS.OSUENVIRENGR: AS, Environmental Engineering, OSU
AS.PSUENVIRENGR: AS, Environmental Engineering, PSU
AS.PSUGEOLOGY: AS, Geology, PSU

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Yes

Reason for proposal

Common Course Numbering

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email

Course Prefix: MTH - Mathematics

Course Number: 251Z ~~251~~

Department: Mathematics

Division: Academic Foundations and Connections (AFAC)

Course Title: Differential Calculus~~I~~

Grading

Grade Scheme: Standard (STND)

Credit Type: Credit Course

Allow Pass/No Pass: Yes

Only Pass/No Pass: No

Audit: Yes

CEU's

Min Credit: 4.00 ~~5.00~~

Variable Credit: No

Max Credit

Variable Credit Increment

Contact hours

Lecture	44.00 ~~55.00~~
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44 ~~55~~
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

This course explores limits, continuity, derivatives, and their applications for real-valued functions of a single variable. These topics will be explored graphically, numerically, and symbolically in real-life applications. This course emphasizes abstraction, problem-solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of technology. ~~For science, engineering, and mathematics students, this is the first course in the four-term Calculus sequence. Focuses on the analysis of functions using limits and differential calculus. Emphasis on applying calculus concepts and techniques to model and solve appropriate real-world applications.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites MTH-112Z with a C or better, or placement in MTH-251Z ~~MTH-251~~

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

WRD-098 or placement in WR-121Z

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Summer/Fall/Winter/Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

Yes

Related Instruction Area: Computation

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Mathematics

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~determine limits numerically, graphically, and algebraically; (MA1)(MA2)~~
~~2~~	~~demonstrate understanding of the limit definition of the derivative and its interpretation as an instantaneous rate of change; (MA1)(MA2)~~
~~3~~	~~demonstrate understanding of the derivative as a function and use the local linearity of functions to obtain approximations from the derivative; (MA1)(MA2)~~
~~4~~	~~apply techniques of differentiation by choosing the appropriate derivative rule for the appropriate type of function; (MA1)~~
~~5~~	~~interpret the meaning of the first and second derivatives in various scenarios, and use technology to investigate and verify; (MA2)~~
~~6~~	~~use the first and second derivative in problem solving that requires sustained reasoning and technology to reach successful conclusions. (MA2)~~
1	alculate limits graphically, numerically, and symbolically; describe the behavior of functions using limits and continuity; and recognize indeterminate forms; (CCN)
2	apply the definition of the derivative and analyze average and instantaneous rates of change; (CCN)
3	interpret and apply the concepts of the first and second derivative to describe and illustrate function features including the slopes of tangent lines, locations of extrema and inflection points, and intervals of increase, decrease, and concavity; (CCN)

	Upon successful completion of this course, students should be able to:
4	apply product, quotient, chain, and function-specific rules to differentiate combinations of power, polynomial, rational, exponential, logarithmic, trigonometric, and inverse trigonometric functions, as well as functions defined implicitly; (CCN)
5	apply derivatives to a variety of problems in mathematics and other disciplines, including related rates, optimization, and L'Hôpital's rule. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination

Other Assessment Tools

Other Assessment Tools

Major Topic Outline	1. Limits a. Graphically b. Numerically c. Algebraically 2. Differentiation a. Instantaneous rate of change b. Difference quotient c. Differentiability vs. Continuity d. Derivative as a function 3. Symbolic differentiation a. Product rule b. Quotient rule c. Chain rule d. Implicit differentiation 4. Using the derivative a. Critical Values b. Local and Global Extrema c. Inflection points d. Concavity 5. Applications of Differentiation a. Optimization b. Related Rates

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)	PSU: MTH 251 EOU: MATH 251 OIT: MATH 251 SOU: MTH 251 UO: MATH 251 WOU: MTH 251 OSU: MTH 251

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

PSU: MTH 251 EOU: MATH 251 OIT: MATH 251 SOU: MTH 251 UO: MATH 251 WOU: MTH 251 OSU: MTH 251

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

PSU: MTH 251 EOU: MATH 251 OIT: MATH 251 SOU: MTH 251 UO: MATH 251 WOU: MTH 251 OSU: MTH 251

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

PSU: MTH 251 EOU: MATH 251 OIT: MATH 251 SOU: MTH 251 UO: MATH 251 WOU: MTH 251 OSU: MTH 251

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

PSU: MTH 251 EOU: MATH 251 OIT: MATH 251 SOU: MTH 251 UO: MATH 251 WOU: MTH 251 OSU: MTH 251

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s)

PSU: MTH 251 EOU: MATH 251 OIT: MATH 251 SOU: MTH 251 UO: MATH 251 WOU: MTH 251 OSU: MTH 251

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s)

PSU: MTH 251 EOU: MATH 251 OIT: MATH 251 SOU: MTH 251 UO: MATH 251 WOU: MTH 251 OSU: MTH 251

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s)

PSU: MTH 251 EOU: MATH 251 OIT: MATH 251 SOU: MTH 251 UO: MATH 251 WOU: MTH 251 OSU: MTH 251

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

Please attach documentation

Reviewer Comments

Key: 1136

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 7:26 am

Viewing: **MTH-252Z** ~~**MTH-252**~~ **: Integral Calculus** ~~**II**~~

Also listed as: ~~**MTH-252**~~

Formerly known as: **MTH-252**

Last approved: 09/30/23 4:41 am

Last edit: 03/24/25 7:26 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	**MTH-252:** Engineering (ENGR) Math Course Pathways and Prerequisites Mathematics (MTH) Physics (PH) **MTH-252Z:** Associate of Science Degrees (AS)
Programs referencing this course	**MTH-252Z:** AS.OSUINDENG: AS, Industrial Engineering, OSU AS.OSUBIOLENGR: AS, Biological Engineering, OSU AS.OITMECHENGR: AS, Mechanical Engineering, OIT AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.PSUMECHENGR: AS, Mechanical Engineering, PSU AS.PSUMUSIC: AS, Music, PSU AS.TBIOLOGY: Biology (AST) AS.OSUBIOLOGY: AS, Biology, OSU NA.OTM: Oregon Transfer Module AS.PSUBIOLOGY: AS, Biology, PSU AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT AS.UOBIOLOGY: AS, Biology, UofO AS.OSUARCHENGR: AS, Architectural Engineering, OSU AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST) NA.CTM: Core Transfer Map AS.OSUCHEMENGR: AS, Chemical Engineering, OSU AS.OSUCIVILENGR: AS, Civil Engineering, OSU AS.PSUCIVILENGR: AS, Civil Engineering, PSU AS.PSUCOMPENGR: AS, Computer Engineering, PSU AS.PSUCOMPSCI: AS, Computer Science, PSU AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU AS.OSUECOLENGR: AS, Ecological Engineering, OSU AS.OITELECENGR: AS, Electrical Engineering, OIT AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AS.PSUELECTENGR: AS, Electrical Engineering, PSU AAS.ELECTRONENGTECH: Electronics Engineering Technology AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AS.PSUENGLISH: AS, English, PSU AGS.GENERAL: Associate of General Studies

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:45 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Sep 30, 2023 by Megan Feagles (megan.feagles)

AS.OSUENVIRENGR: AS, Environmental Engineering, OSU
AS.PSUENVIRENGR: AS, Environmental Engineering, PSU
AS.PSUGEOLOGY: AS, Geology, PSU

Justification for this inactivation request

Credits/Hours/Instructional Method Change
Yes

Reason for proposal
Common Course Numbering

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email

Course Prefix: MTH - Mathematics

Course Number: 252Z ~~252~~

Department: Mathematics

Division: Academic Foundations and Connections (AFAC)

Course Title: Integral Calculus ~~II~~

Grading

Grade Scheme: Standard (STND)

Credit Type: Credit Course

Allow Pass/No Pass: Yes

Only Pass/No Pass: No

Audit: Yes

CEU's

Min Credit: 4.00 ~~5.00~~

Variable Credit: No

Max Credit

Variable Credit Increment

Contact hours

Lecture	44.00 ~~55.00~~
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44 ~~55~~
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

This course explores Riemann sums, definite integrals, and indefinite integrals for real-valued functions of a single variable. These topics will be explored graphically, numerically, and symbolically in real-life applications. This course emphasizes abstraction, problem-solving, modeling, reasoning, communication, connections with other disciplines, and the appropriate use of technology. ~~For science, engineering, and mathematics students, this is the second course in the four-term Calculus sequence. Focuses on understanding integral calculus and using anti-differentiation techniques. Emphasis on applying the calculus to model and solve appropriate real-world applications.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites MTH-251Z ~~MTH-251~~ with a C or better

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

WRD-098 or placement in WR-121Z

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Summer/Fall/Winter/Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

Yes

Related Instruction Area: Computation

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Mathematics

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~use graphical, numerical, and analytical techniques to construct a function from its derivative; (MA1)(MA2)~~
~~2~~	~~use Riemann sums to approximate the area under a curve both numerically and graphically; (MA1)~~
~~3~~	~~apply appropriate integration techniques to find the antiderivatives of a function; (MA2)~~
~~4~~	~~use the Evaluation Theorem and the Fundamental Theorem of Calculus to evaluate integrals; (MA1)~~
~~5~~	~~sketch two- and three-dimensional regions and use integral calculus to model and determine the area or volume of such regions; (MA1)(MA2)~~
~~6~~	~~model and evaluate the average value and arc length of a function over an interval; (MA1)(MA2)~~
~~7~~	~~use integral calculus to model and solve applications in physics, engineering, health sciences, business, or probability and interpret the results in the context of the application. (MA1)(MA2)~~
1	approximate definite integrals using Riemann sums and apply this to the concept of accumulation and the definition of the definite integral; (CCN)
2	explain and use both parts of the Fundamental Theorem of Calculus; (CCN)

	Upon successful completion of this course, students should be able to:
3	choose and apply integration techniques including substitution, integration by parts, basic partial fraction decomposition, and numerical techniques to integrate combinations of power, polynomial, rational, exponential, logarithmic, trigonometric, and inverse trigonometric functions; (CCN)
4	use the integral to model and solve problems in mathematics involving area, volume, net change, average value, and improper integration; (CCN)
5	apply integration techniques to solve a variety of problems, such as work, force, center of mass, or probability. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination

Other Assessment Tools

Other Assessment Tools

Major Topic Outline: 1. Antidifferentiation a. Constructing a function from its derivative b. Riemann sums c. Antiderivatives d. Substitution e. Integration by parts 2. Integration a. The Fundamental Theorem of Calculus b. Area under a curve c. Definite and indefinite integrals d. Improper integrals 3. Applications of the definite integral. a. Area between two curves b. Average value of a function c. Volume by discs and washers d. Arc length e. Modeling and solving real-world applications

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course: 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s): PSU: MTH 252 EOU: MATH 252 OIT: MATH 252 and MASC 000 SOU: MTH 252 UO: MATH 252 WOU: MTH 252 OSU: MTH 252

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s): PSU: MTH 252 EOU: MATH 252 OIT: MATH 252 and MASC 000 SOU: MTH 252 UO: MATH 252 WOU: MTH 252 OSU: MTH 252

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s): PSU: MTH 252 EOU: MATH 252 OIT: MATH 252 and MASC 000 SOU: MTH 252 UO: MATH 252 WOU: MTH 252 OSU: MTH 252

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s): PSU: MTH 252 EOU: MATH 252 OIT: MATH 252 and MASC 000 SOU: MTH 252 UO: MATH 252 WOU: MTH 252 OSU: MTH 252

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s): PSU: MTH 252 EOU: MATH 252 OIT: MATH 252 and MASC 000 SOU: MTH 252 UO: MATH 252 WOU: MTH 252 OSU: MTH 252

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s): PSU: MTH 252 EOU: MATH 252 OIT: MATH 252 and MASC 000 SOU: MTH 252 UO: MATH 252 WOU: MTH 252 OSU: MTH 252

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s): PSU: MTH 252 EOU: MATH 252 OIT: MATH 252 and MASC 000 SOU: MTH 252 UO: MATH 252 WOU: MTH 252 OSU: MTH 252

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s)

PSU: MTH 252 EOU: MATH 252 OIT: MATH 252 and MASC 000 SOU: MTH 252 UO: MATH 252 WOU: MTH 252 OSU: MTH 252

How does it transfer?

general education or distribution requirement

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer tools at university websites

Please attach documentation

Reviewer Comments

Key: 1137

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 7:26 am

Viewing: **MTH-253Z** ~~**MTH-253**~~ : **Calculus: Sequences and Series**

~~**Calculus III**~~

Also listed as: ~~**MTH-253**~~

Formerly known as: **MTH-253**

Last approved: 02/08/25 5:31 am

Last edit: 03/24/25 7:26 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	**MTH-253:** Mathematics (MTH)
Programs referencing this course	**MTH-253Z:** AS.PSUMUSIC: AS, Music, PSU NA.OTM: Oregon Transfer Module NA.CTM: Core Transfer Map AS.PSUCOMPENGR: AS, Computer Engineering, PSU AS.PSUCOMPSCI: AS, Computer Science, PSU AS.OITELECENGR: AS, Electrical Engineering, OIT AS.PSUELECTENGR: AS, Electrical Engineering, PSU AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AGS.GENERAL: Associate of General Studies AS.PSUGEOLOGY: AS, Geology, PSU

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Yes

Reason for proposal

Common Course Numbering

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email

Course Prefix MTH - Mathematics

Course Number 253Z ~~253~~

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:45 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Sep 30, 2023 by Megan Feagles (megan.feagles)
2. Feb 8, 2025 by Kelly Mercer (kelly.mercer)

Department	Mathematics
Division	Academic Foundations and Connections (AFAC)
Course Title	Calculus: Sequences and Series ~~Calculus III~~

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	4.00 ~~5.00~~
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	44.00 ~~55.00~~
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44 ~~55~~
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class an out-of-class activity.

Yes

Course Description

This course explores real-valued sequences and series, including power and Taylor series. Topics include convergence and divergence tests and applications. These topics will be explored graphically, numerically, and symbolically. This course emphasizes abstraction, problem-solving, reasoning, communication, connections with other disciplines, and the appropriate use of technology. ~~Investigates indeterminate forms, improper integrals, convergence of sequences and series, power series, Taylor series and Taylor polynomials, error analysis of numerical estimates, complex numbers and the Euler formula, parametric equations, vectors, dot products, and the geometry of lines and planes in space.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites MTH-252Z ~~MTH-252~~ with a C or better

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

WRD-098 or placement in WR-121Z

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Summer/Winter/Spring

Will this class use library resources?

No

Have you talked with a librarian regarding that impact?

Course Certifications

Is this a Related Instruction course?

Yes

Related Instruction Area: Computation

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Mathematics

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~determine whether an infinite series converges or diverges, and use an appropriate test to confirm that assessment; (MA1)(MA2)~~
~~2~~	~~extend the notion of a function to embrace functions defined as power series, connecting the concept of convergence to the domain of a function; (MA1)(MA2)~~
~~3~~	~~perform all the calculus-based operations of analysis on such a function, such as derivatives and integrals; (MA1)(MA2)~~
~~4~~	~~use parametric equations and vectors to explore the geometry of three-dimensional space. (MA1)(MA2)~~
1	recognize and define sequences in a variety of forms and describe their properties, including the concepts of convergence and divergence, boundedness, and monotonicity; (CCN)
2	recognize and define series in terms of a sequence of partial sums and describe their properties, including convergence and divergence; (CCN)
3	recognize series as harmonic, geometric, telescoping, alternating, or p-series, and demonstrate whether they are absolutely convergent, conditionally convergent, or divergent, and find their sum if applicable; (CCN)
4	choose and apply the divergence, integral, comparison, limit comparison, alternating series, and ratio tests to determine the convergence or divergence of a series; (CCN)
5	determine the radius and interval of convergence of power series, and use Taylor series to represent, differentiate, and integrate functions; (CCN)
6	use techniques and properties of Taylor polynomials to approximate functions and analyze error. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination

Other Assessment Tools

Other Assessment Tools

Major Topic Outline

1. Indeterminate forms 2. Improper integrals 3. Sequences 4. Series 5. Series convergence tests 6. Analysis of functions represented as power series 7. Taylor series and Taylor polynomial approximations 8. Complex numbers 9. Parametric equations in two and three dimensions 10. Vectors and dot products 11. Lines and planes in two and three dimensions

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s) MTH253 at all Oregon schools

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer equivalency tools at institution websites

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s) MTH253 at all Oregon schools

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer equivalency tools at institution websites

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s): MTH253 at all Oregon schools

How does it transfer?
- general education or distribution requirement
- general elective
- required or support for major

Evidence of transferability
- Other. Please explain.

Explanation of other evidence of transferability
- Transfer equivalency tools at institution websites

OUS school to which the course will transfer
- OSU-C - OSU-Cascade

Comparable course(s): MTH253 at all Oregon schools

How does it transfer?
- general education or distribution requirement
- general elective
- required or support for major

Evidence of transferability
- Other. Please explain.

Explanation of other evidence of transferability
- Transfer equivalency tools at institution websites

OUS school to which the course will transfer
- PSU - Portland State University

Comparable course(s): MTH253 at all Oregon schools

How does it transfer?
- general education or distribution requirement
- general elective
- required or support for major

Evidence of transferability
- Other. Please explain.

Explanation of other evidence of transferability
- Transfer equivalency tools at institution websites

OUS school to which the course will transfer
- SOU - Southern Oregon University

Comparable course(s): MTH253 at all Oregon schools

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer equivalency tools at institution websites

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s): MTH253 at all Oregon schools

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer equivalency tools at institution websites

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s): MTH253 at all Oregon schools

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Transfer equivalency tools at institution websites

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 1:09 pm

Viewing: SOC-204Z ~~SOC-204~~ : Introduction to Sociology

Also listed as: ~~SOC-204~~

Formerly known as: SOC-204

Last approved: 11/07/23 5:05 am

Last edit: 03/24/25 1:09 pm

Changes proposed by: Dru Urbassik (dru.urbassik)

Catalog Pages referencing this course

SOC-204:

Sociology (SOC)

Programs referencing this course

SOC-204Z:

AS.OSUINDENG: AS, Industrial Engineering, OSU
AS.OSUBIOLENGR: AS, Biological Engineering, OSU
AAS.MICROSYSTECH: Microelectronics Systems Technology
AS.PSUMUSIC: AS, Music, PSU
AS.TBIOLOGY: Biology (AST)
AS.OSUBIOLOGY: AS, Biology, OSU
NA.OTM: Oregon Transfer Module
AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST)
AS.TBUSINESS: Business (AST)
NA.CTM: Core Transfer Map
AS.OSUCHEMENGR: AS, Chemical Engineering, OSU
AAS.EARLYCHILDFAM: Early Childhood Education & Family Studies
AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU
AAS.ELECTRONENGTECH: Electronics Engineering Technology
AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT)

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:46 am Megan Feagles (megan.feagles): Approved for Curriculum Office
2. 03/24/25 8:58 am Megan Feagles (megan.feagles): Rollback to Curriculum Office for Curriculum Committee Approval
3. 03/24/25 8:59 am Megan Feagles (megan.feagles): Rollback to Initiator
4. 03/24/25 1:17 pm Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

AS.PSUENGLISH: AS, English, PSU
AGS.GENERAL: Associate of General Studies
AA.ENGLIT: English Literature (AAT)
AS.OSUENVIRENGR: AS, Environmental Engineering, OSU

Credits/Hours/Instructional Method Change

No

Is Topic Shell Course?

No

Are you the Faculty Contact Person?

No

Faculty Contact Email

erichp@clackamas.edu

Course Prefix	SOC - Sociology
Course Number	204Z ~~204~~
Department	Social Sciences
Division	Arts and Sciences
Course Title	Introduction to Sociology

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Introduces the central concepts, theories, and methods that define the sociological approach to investigating the social forces that shape our lives. Topics may include social structure, culture, socialization, race, class, gender, sexuality, and inequality. ~~This course offers an introduction to the field of sociology. Sociology is the scientific study of human behavior in society. In this course we will introduce and discuss issues including the sociological imagination, culture, socialization, deviance, authority, religion, science and methods of sociological research. Various sociological theories will be introduced and utilized to explore and enhance our understanding of these issues.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Discipline Studies

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

WRD-098 or placement in WR-121Z

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Summer/Fall/Winter/Spring

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Social Sciences

Cultural Literacy

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~apply analytical skills into the interrelationship between the individual and society; (SS1)~~
~~2~~	~~explore the significance of historical context to the link between one's personal life and the social world around them; (CL1)~~
~~3~~	~~demonstrate an understanding of key sociological concepts and various sociological approaches, methods and perspectives through comparison, application, analysis, discussion, and writing;~~
~~4~~	~~critically analyze various social, economic, political and cultural issues using various sociological frameworks; (SS2)~~
~~5~~	~~analyze social phenomena by evaluating information, evidence, argument and/or theory to draw logical conclusions or implications. (SS1)~~
1	describe the central concepts, theories, and methods that define sociological approaches to social scientific inquiry; (CCN)
2	analyze social life using sociological concepts and theories; (CCN)
3	explain how the sociological imagination interrelates different levels of analysis such as social structures and individuals; (CCN)
4	identify how social factors contribute to inequalities in society; (CCN)
5	explain the role of theory and evidence in building sociological knowledge. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

S

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

S

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Projects
Writing Assignments

Major Topic Outline

1. Sociological perspective. 2. Sociological investigation. 3. Culture. 4. Society. 5. Socialization. 6. Social interaction. 7. Groups and organizations. 8. Deviance. 9. Social stratification.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

OSU 204 PSU 200 WOU 223D OIT 204 SOU 204

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Web research

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

OSU 204 PSU 200 WOU 223D OIT 204 SOU 204

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Web research

OUS school to which the course will transfer

OSU - Oregon State University

Comparable
course(s)

OSU 204 PSU 200 WOU 223D OIT 204 SOU 204

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Web research

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable
course(s)

OSU 204 PSU 200 WOU 223D OIT 204 SOU 204

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Web research

OUS school to which the course will transfer

PSU - Portland State University

Comparable
course(s)

OSU 204 PSU 200 WOU 223D OIT 204 SOU 204

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Web research

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable
course(s)

OSU 204 PSU 200 WOU 223D OIT 204 SOU 204

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Web research

OUS school to which the course will transfer

UO - University of Oregon

Comparable
course(s)

OSU 204 PSU 200 WOU 223D OIT 204 SOU 204

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Web research

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable
course(s)

OSU 204 PSU 200 WOU 223D OIT 204 SOU 204

How does it transfer?

general education or distribution requirement

general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Web research

Please attach documentation

Reviewer Comments

Key: 1463

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 1:10 pm

Viewing: SOC-205Z ~~SOC-206~~ : ~~Institutions &~~ Social Change and Institutions

Also listed as: ~~SOC-206~~

Formerly known as: SOC-206

Last approved: 04/20/24 3:24 am

Last edit: 03/24/25 1:10 pm

Changes proposed by: Dru Urbassik (dru.urbassik)

Catalog Pages referencing this course

SOC-206:

Sociology (SOC)

Programs referencing this course

SOC-205Z:

AS.OSUINDENG: AS, Industrial Engineering, OSU
AS.OSUBIOLENGR: AS, Biological Engineering, OSU
AAS.MICROSYSTECH: Microelectronics Systems Technology
AS.PSUMUSIC: AS, Music, PSU
AS.TBIOLOGY: Biology (AST)
AS.OSUBIOLOGY: AS, Biology, OSU
NA.OTM: Oregon Transfer Module
AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST)
AS.TBUSINESS: Business (AST)
NA.CTM: Core Transfer Map
AS.OSUCHEMENGR: AS, Chemical Engineering, OSU
AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU
AAS.ELECTRONENGTECH: Electronics Engineering Technology
AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT)
AGS.GENERAL: Associate of General Studies

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:46 am Megan Feagles (megan.feagles): Approved for Curriculum Office
2. 03/24/25 8:57 am Megan Feagles (megan.feagles): Approved for Curriculum Committee Approval
3. 03/24/25 8:58 am Megan Feagles (megan.feagles): Rollback to Initiator
4. 03/24/25 1:17 pm Megan Feagles (megan.feagles): Approved for Curriculum Office
5. 03/24/25 1:18 pm Megan Feagles (megan.feagles): Approved for Curriculum Committee Approval

AA.ENGLIT: English Literature (AAT)
AS.OSUENVIRENGR: AS, Environmental Engineering, OSU
AS.OSUGENHORT: AS, Horticulture, OSU

6. 03/24/25 1:18 pm Megan Feagles (megan.feagles): Rollback to Curriculum Committee Approval for Colleague

Credits/Hours/Instructional Method Change

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)
2. Apr 20, 2024 by Amy Burghardt (amyb)

No

Is Topic Shell Course?

No

Are you the Faculty Contact Person?

No

Faculty Contact
Email
erichp@clackamas.edu

Course Prefix	SOC - Sociology
Course Number	205Z ~~206~~
Department	Social Sciences
Division	Arts and Sciences
Course Title	~~Institutions &~~ Social Change and Institutions

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course

Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Sociological analysis of social institutions, such as family, education, health care, the economy, and the state. Includes an examination of connections among institutions and their impact on patterns of inequality and individual outcomes. Examines the forces and dynamics behind social change, such as social movements, culture, economic forces, technologies, and the environment. ~~This course explores how people can change their society. Social change is a process that can be used by people in a society, to change and improve the functioning of their society. This course will explore and discuss how people-led social movements, in the past and in the present, can be developed, organized, and implemented to accomplish social change.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Discipline Studies

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

WRD-098 or placement in WR-121Z

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule

Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall/Winter/Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Social Sciences

Cultural Literacy

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~identify key sociological concepts and patterns of social change;~~
~~2~~	~~analyze and describe the varying impact of social change on everyday lives and experiences of individuals, communities, institutions and societies; (SS1)(SS2)~~
~~3~~	~~demonstrate an understanding of the significance of historical context to the patterns, impact and direction of social change; (CL1)~~
~~4~~	~~apply and assess various theories of social change to relevant social, cultural, political and economic issues through comparison, application, analysis, discussion, and writing; (SS1)(SS2)~~
~~5~~	~~analyze social phenomena by evaluating information, evidence, argument and/or theory to draw logical conclusions or implications. (SS1)~~
1	discuss the history of key social institutions; (CCN)
2	analyze major social institutions and change using sociological concepts, theory, and research; (CCN)
3	describe how the structure of institutions shapes patterns of social inequality; (CCN)
4	discuss diversity of experiences that individuals have with institutions based on group membership, such as race and ethnicity, gender, sexuality, and social class; (CCN)

	Upon successful completion of this course, students should be able to:
5	describe how and why societies change over time. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

S

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

S

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Projects
Writing Assignments

Major Topic Outline

Students will study the sociological perspective of: 1. Social change. 2. Patterns of change. 3. Impact on various social institutions: Religion, Politics, Government, Economics, Work, Population, Health, Family. 4. Movements. 5. Modernity.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

PSU: ldt WOU: LDT OIT: General Ed SOU: 205

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable
course(s)

PSU: ldt WOU: LDT OIT: General Ed SOU: 205

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

OSU - Oregon State University

Comparable
course(s)

PSU: ldt WOU: LDT OIT: General Ed SOU: 205

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable
course(s)

PSU: ldt WOU: LDT OIT: General Ed SOU: 205

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

PSU - Portland State University

Comparable
course(s)

PSU: ldt WOU: LDT OIT: General Ed SOU: 205

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable
course(s)

PSU: ldt WOU: LDT OIT: General Ed SOU: 205

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

UO - University of Oregon

Comparable
course(s)

PSU: ldt WOU: LDT OIT: General Ed SOU: 205

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable
course(s)

PSU: ldt WOU: LDT OIT: General Ed SOU: 205

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 1:11 pm

Viewing: SOC-206Z ~~SOC-225~~ : Social Problems

Also listed as: ~~SOC-225~~

Formerly known as: SOC-225

Last approved: 04/06/24 3:21 am

Last edit: 03/24/25 1:11 pm

Changes proposed by: Dru Urbassik (dru.urbassik)

Catalog Pages referencing this course

SOC-225:

Sociology (SOC)

Programs referencing this course

SOC-206Z:

AS.OSUINDENG: AS, Industrial Engineering, OSU
AS.OSUBIOLENGR: AS, Biological Engineering, OSU
AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU
AAS.MICROSYSTECH: Microelectronics Systems Technology
AS.PSUMUSIC: AS, Music, PSU
AS.TBIOLOGY: Biology (AST)
AS.OSUBIOLOGY: AS, Biology, OSU
NA.OTM: Oregon Transfer Module
AS.OSUARCHENGR: AS, Architectural Engineering, OSU
AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST)
AS.TBUSINESS: Business (AST)
NA.CTM: Core Transfer Map
AS.OSUCHEMENGR: AS, Chemical Engineering, OSU
AS.OSUCIVILENGR: AS, Civil Engineering, OSU
AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU
AS.OSUECOLENGR: AS, Ecological Engineering, OSU
AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:46 am Megan Feagles (megan.feagles): Approved for Curriculum Office
2. 03/24/25 8:58 am Megan Feagles (megan.feagles): Rollback to Curriculum Office for Curriculum Committee Approval
3. 03/24/25 8:59 am Megan Feagles (megan.feagles): Rollback to Initiator
4. 03/24/25 1:17 pm Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

AAS.ELECTRONENGTECH: Electronics Engineering Technology
AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT)
AGS.GENERAL: Associate of General Studies
AA.ENGLIT: English Literature (AAT)
AS.OSUENVIRENGR: AS, Environmental Engineering, OSU
AS.OSUGENHORT: AS, Horticulture, OSU

2. Apr 6, 2024 by Amy Burghardt (amyb)

Credits/Hours/Instructional Method Change

No

Is Topic Shell Course?

No

Are you the Faculty Contact Person?

No

Faculty Contact
Email
erichp@clackamas.edu

Course Prefix	SOC - Sociology
Course Number	206Z ~~225~~
Department	Social Sciences
Division	Arts and Sciences
Course Title	Social Problems

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Applies the sociological perspective to the study of social problems, including their social construction, causes, and consequences. Explores the complexities surrounding their solutions, such as how solutions are socially constructed and policy proposals from sociologists and social movements. Topics may include poverty, discrimination, interpersonal violence, crime, addiction, ecological crises, war/global conflict, and health inequality. ~~Applies the sociological framework to the study of social problems, their identification, analysis of causes and possible solutions. Problems explored may include mental disorders, drug and alcohol addiction, crime and delinquency, group discrimination, inequality, poverty, alienation, domestic and international violence, environment, and energy.~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Discipline Studies

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

WRD-098 or placement in WR-121Z

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule

Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall/Winter/Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Social Sciences

Cultural Literacy

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
~~1~~	~~analyze and demonstrate an understanding of the sociological approach to the study of social problems; discuss objective and subjective elements of social problems; (SS1)~~
~~2~~	~~critically analyze interrelationships among social problems and proposed solutions and the significance of historical context to defining and solving social problems; (CL1)(SS2)~~
~~3~~	~~discuss the extent, impact and causes of different social problems and critically analyze solutions using a variety of sociological approaches through comparison, application, analysis, discussion and writing;~~
~~4~~	~~analyze social phenomena by evaluating information, evidence, argument and/or theory to draw logical conclusions or implications. (SS1)~~
1	describe the ways in which social problems are defined and constructed; (CCN)
2	apply the sociological perspective to identify and analyze social problems; (CCN)
3	distinguish between individual and structural explanations of social problems; (CCN)
4	assess the effects of social problems using empirical evidence; (CCN)
5	examine the structural, institutional, and cultural roots of social problems; (CCN)
6	assess solutions to address social problems. (CCN)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

S

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

S

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Projects
Writing Assignments

Major Topic Outline

Students will study the sociological approach to the study of social problems including: 1. Key concepts. 2. Theoretical perspectives and research. 3. Patterns. 4. Theories. 5. Social factors for various problems. 6. Strategies and solutions.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

OSU: 206 PSU: LDT SOU: LDT WOU: 225D OIT: Gen Ed

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable
course(s)

OSU: 206 PSU: LDT SOU: LDT WOU: 225D OIT: Gen Ed

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

OSU - Oregon State University

Comparable
course(s)

OSU: 206 PSU: LDT SOU: LDT WOU: 225D OIT: Gen Ed

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable
course(s)

OSU: 206 PSU: LDT SOU: LDT WOU: 225D OIT: Gen Ed

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

PSU - Portland State University

Comparable
course(s)

OSU: 206 PSU: LDT SOU: LDT WOU: 225D OIT: Gen Ed

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable
course(s)

OSU: 206 PSU: LDT SOU: LDT WOU: 225D OIT: Gen Ed

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

UO - University of Oregon

Comparable
course(s)

OSU: 206 PSU: LDT SOU: LDT WOU: 225D OIT: Gen Ed

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable
course(s)

OSU: 206 PSU: LDT SOU: LDT WOU: 225D OIT: Gen Ed

How does it transfer?

general education or distribution requirement
general elective

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

web research

Please attach documentation

Reviewer Comments

Key: 1467

Preview Bridge

Clackamas Community College

CCN-Related Course Changes

1. Course Title Change

Course	Current Title	Proposed Title
BI-221LZ	General Biology for Science Majors (Cellular Biology) Lab	Principles of Biology: Cells Lab
BI-222LZ	General Biology for Science Majors (Animal Biology) Lab	Principles of Biology: Organisms Lab
BI-223LZ	General Biology for Science Majors (Plant Biology & Ecology) Lab	Principles of Biology: Ecology and Evolution Lab
CH-221SZ	General Chemistry Seminar	General Chemistry I Seminar
CH-222SZ	General Chemistry Seminar	General Chemistry II Seminar
CH-223SZ	General Chemistry Seminar	General Chemistry III Seminar

2. Course Number Change

Course	Title	Proposed Course Number
BI-221L	Principles of Biology: Cells Lab	BI-221LZ
BI-222L	Principles of Biology: Organisms Lab	BI-222LZ
BI-223L	Principles of Biology: Ecology and Evolution Lab	BI-223LZ
CH-221S	General Chemistry I Seminar	CH-221SZ
CH-222S	General Chemistry II Seminar	CH-222SZ
CH-223S	General Chemistry III Seminar	CH-223SZ

3. Outlines for Approval

Course	Title	Implementation
BI-221LZ	Principles of Biology: Cells Lab	2025/SU
BI-222LZ	Principles of Biology: Organisms Lab	2025/SU
BI-223LZ	Principles of Biology: Ecology and Evolution Lab	2025/SU
BI-231	Human Anatomy & Physiology I	2025/SU
BI-234	Introductory Microbiology	2025/SU
BT-271	Advanced Business Projects	2025/SU
CH-150	Preparatory Chemistry	2025/SU
CH-221SZ	General Chemistry I Seminar	2025/SU
CH-222SZ	General Chemistry II Seminar	2025/SU
CH-223SZ	General Chemistry III Seminar	2025/SU
CH-241	Organic Chemistry I	2025/SU
CS-250	Discrete Structures I	2025/SU
ENGR-201	Electrical Fundamentals	2025/SU
ENGR-211	Statics	2025/SU
ENGR-221	Electrical Circuit Analysis I	2025/SU
ENGR-231	Properties of Materials	2025/SU
MTH-231	Elements of Discrete Mathematics	2025/SU
MTH-254	Vector Calculus	2025/SU
MTH-256	Differential Equations	2025/SU
MTH-261	Linear Algebra	2025/SU
MTH-275	A Bridge to University Mathematics	2025/SU
PH-150	Preparatory Physics	2025/SU
PH-201	General Physics	2025/SU

PH-211	General Physics With Calculus	2025/SU
PH-212	General Physics With Calculus	2025/SU

Highlights

- updating BI lab courses to match CCN titles
- updating BI lab courses to have “LZ” at the end
- updating CH seminar courses to match CCN titles
- updating CH seminar courses to have “SZ” at the end
- most of the changes are updating requisites
    - Prerequisite: MTH-251 becomes Prerequisite: MTH-251Z
- where CH-221 was a prerequisite now replaced with CH-221Z AND CH-227Z (same for CH-222 and CH-223)
    - Prerequisite: CH-221 with a C or better becomes Prerequisite: CH-221Z and CH-227Z with a C or better

Course Change Request

Date Submitted: 03/24/25 7:21 am

Viewing: **BI-221LZ ~~BI-211L~~ : Principles of Biology: Cells Lab ~~General Biology for Science Majors (Cellular Biology) Lab~~**

Also listed as: **~~BI-211L~~**

Formerly known as: **BI-211L**

Last approved: 11/07/23 4:59 am

Last edit: 03/24/25 7:21 am

Changes proposed by: Megan Feagles (megan.feagles)

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:44 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

Catalog Pages referencing this course

BI-211L:

Biology (BI)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	BI - Biology
Course Number	221LZ ~~211L~~
Department	Science
Division	Arts and Sciences
Course Title	

Principles of Biology: Cells Lab ~~General Biology for Science Majors (Cellular Biology) Lab~~

Grading

Grade Scheme	Non-Graded (Null)
Credit Type	Non-Transcripted Course
Allow Pass/No Pass	No
Audit	No
Min Credit	0.00
Variable Credit	No

Contact hours

Lecture	
Lec/Lab	
Lab	33.00
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Lab course for BI-221Z ~~BI-211~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

BI-221Z ~~BI-211~~

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

Yes

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:20 am

Viewing: **BI-222LZ ~~BI-212L~~ : Principles of Biology: Organisms Lab ~~General Biology for Science Majors (Animal Biology) Lab~~**

Also listed as: **~~BI-212L~~**

Formerly known as: **BI-212L**

Last approved: 11/07/23 4:59 am

Last edit: 03/24/25 7:20 am

Changes proposed by: Megan Feagles (megan.feagles)

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:44 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

Catalog Pages referencing this course

BI-212L:

Biology (BI)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	BI - Biology
Course Number	222LZ ~~212L~~
Department	Science
Division	Arts and Sciences
Course Title	

Principles of Biology: Organisms Lab ~~General Biology for Science Majors (Animal Biology) Lab~~

Grading

Grade Scheme	Non-Graded (Null)
Credit Type	Non-Transcripted Course
Allow Pass/No Pass	No
Audit	No
Min Credit	0.00
Variable Credit	No

Contact hours

Lecture	
Lec/Lab	
Lab	33.00
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Lab course for BI-222Z ~~BI-212~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

BI-222Z ~~BI-212~~

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

Yes

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:19 am

Viewing: **BI-223LZ ~~BI-213L~~ : Principles of Biology: Ecology and Evolution Lab ~~General Biology for Science Majors (Plant Biology & Ecology) Lab~~**

Also listed as: **~~BI-213L~~**

Formerly known as: **BI-213L**

Last approved: 11/07/23 4:59 am

Last edit: 03/24/25 7:19 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

BI-213L:

Biology (BI)

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:44 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	BI - Biology
Course Number	223LZ ~~213L~~
Department	Science
Division	Arts and Sciences
Course Title	

Principles of Biology: Ecology and Evolution Lab ~~General Biology for Science Majors (Plant Biology & Ecology) Lab~~

Grading

Grade Scheme	Non-Graded (Null)
Credit Type	Non-Transcripted Course
Allow Pass/No Pass	No
Audit	No
Min Credit	0.00
Variable Credit	No

Contact hours

Lecture	
Lec/Lab	
Lab	33.00
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Lab course for BI-223Z ~~BI-213~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

BI-223Z ~~BI-213~~

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

Yes

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:22 am

Viewing: BI-231 : Human Anatomy & Physiology I

Last approved: 03/29/24 3:33 am

Last edit: 03/24/25 11:47 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

- Biology (BI)
- Chemistry (CH)
- Medical Assistant (MA)
- Phlebotomy (PHB)

Programs referencing this course

- CC.MEDASST: Medical Assistant
- CC.MEDBILLCODE: Medical Billing and Coding
- AS.PSUMUSIC: AS, Music, PSU
- AAS.NURSING: Nursing (RN)
- NA.OTM: Oregon Transfer Module
- AAS.WLDLNDMGMT: Wildland Fire Management
- CC.FSWILDLAND: Wildland Fire Science
- AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST)
- AS.TBUSINESS: Business (AST)
- NA.CTM: Core Transfer Map
- AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT)
- AA.OTELEMED: Elementary Education (AAOT)
- CC.EMT: Emergency Medical Technology
- AGS.GENERAL: Associate of General Studies
- AA.ENGLIT: English Literature (AAT)

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:46 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)
2. Mar 29, 2024 by Megan Feagles (megan.feagles)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	BI - Biology
Course Number	231
Department	Science
Division	Arts and Sciences
Course Title	Human Anatomy & Physiology I

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	

Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

A lab course designed for students entering the physical education or medically-related fields. Includes body organization, terminology, tissues and systemic study of the integumentary, skeletal and nervous systems. Animal organ dissection required.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

BI-112 (preferred), or BI-101 and BI-102, or BI-221Z. ~~BI-211.~~ CH-112 (preferred), or CH-104 and CH-105, or CH-221Z, CH-227Z, CH-222Z ~~CH-221~~ and CH-228Z ~~CH-222~~

Corequisites

BI-231L

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Summer/Fall/Winter/Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	demonstrate, in and outside of a laboratory setting, general knowledge of the anatomical and physiological components comprising the body tissues, the integumentary, skeletal/articular, and nervous systems; (SC1)(SC2)
2	demonstrate, in and outside of a laboratory setting, a basic knowledge of the anatomy and associated physiological relationships among these various body systems; (SC1)(SC2)
3	properly use vocabulary associated with the anatomy and physiology of the human body; (SC1)
4	apply, analyze, synthesize, and evaluate physiological principles as applied to systems of the human organism in the healthcare context; (SC1)(SC2)(SC3)

	Upon successful completion of this course, students should be able to:
5	relate the course material to the ethical and sociological implications of health and its impact on society. (SC2)(SC3)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

S

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

S

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

S

Outcome Assessment Strategies

Outcomes Assessment Strategies

Major Topic Outline

1. Introduction to Anatomy and Physiology. a. Levels of Organization. b. Body Cavities. c. Body Planes. d. Directional Terms. e. Overview of the ten body systems. 2. Tissues, Membranes, and Glands. a. Primary Tissue Types. a1. Epithelial - characteristics, location, function. a2. Connective - characteristics, location, function. a3. Muscle - characteristics, location, function. a4. Nervous. B. Membranes. b1. Mucous - definition, location, function. b2. Serous - definition, special. terminology, location, function. b3. Synovial - definition, location, function. b4. Cutaneous - definition. 3. Integumentary System. a. Structural divisions and functions. a1. Epidermis. a2. Dermis. a3. Subcutaneous. b. Sensory Receptors of Skin. c. Skin color determination and function of color. d. Glandular function of skin. d1. Sebaceous. d2. Sudoriferous. d3. Ceruminous. e. Thermoregulation. e1. Arteriovenous Anastomoses. e2. Vasoconstriction and Vasodilation. e3. Perspiration. e4. Hypothalamic Regulation. 4. Skeletal System - components and Functions. a. Bone Histology. a1. Cancellous Bone. a2. Compact Bone. a3. Osteoblasts. a4. Osteoclasts. a5. Osteocytes. b. Bone Physiology. b1. Formation of precursor connective tissue. b2. Ossification. c. Structure and function of long bone. c1. Diaphysis. c2. Epiphysis. c3. Metaphysis and Epiphyseal plate. c4. Medullary cavity. c5. Periosteum. d. Fetal Skeleton. e. Aging and the Skeletal System. f. Common Complaints. f1. Rickets. f2. Osteomalacia. f3. Osteoporosis. 5. Articulations. a. Structural and Functional Groups. a1. Synarthroses. a2. Amphiarthroses. a3. Diarthroses. b. Synovial Joint - detailed structure and function . b1. Bursae. b2. Tendons. b3. Ligaments. b4. Menisci. c. Types of Movement - define and give examples. c1. Gliding. c2. Angular Movements. c3. Rotation. c4.

Circumduction. c5. Special Movements. 6. Nervous System. a. Nervous Tissue Histology. a1. Neuron Anatomy. a2. Neuroglia. a3. Generation of nerve impulses in neurons. a4. Impulse Conduction. a5. Synapse - characteristics and function. a6. Afferent Neurons. a7. Efferent Neurons. b. Central Nervous System. b1. Meninges. b2. Cerebrospinal fluid. b3. Spinal Cord. b4. Brain. c. Autonomic Nervous System. c1. Comparison to Somatic NS. c2. Sympathetic and Parasympathetic Subdivisions. d. Special Senses - structure and function. d1. Gustatory. d2. Olfactory. d3. Optic. d4. Auditory and Equilibrium.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:22 am

Viewing: BI-234 : Introductory Microbiology

Last approved: 03/22/25 4:56 am

Last edit: 03/24/25 11:46 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	Biology (BI) Chemistry (CH)
Programs referencing this course	AS.OSUINDENG: AS, Industrial Engineering, OSU AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.PSUMUSIC: AS, Music, PSU AS.OSUBIOLOGY: AS, Biology, OSU AAS.NURSING: Nursing (RN) NA.OTM: Oregon Transfer Module AS.OSUARCHENGR: AS, Architectural Engineering, OSU AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST) AS.TBUSINESS: Business (AST) NA.CTM: Core Transfer Map AS.OSUCHEMENGR: AS, Chemical Engineering, OSU AS.OSUCIVILENGR: AS, Civil Engineering, OSU AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AA.OTELEMED: Elementary Education (AAOT) AS.PSUENGLISH: AS, English, PSU AGS.GENERAL: Associate of General Studies AA.ENGLIT: English Literature (AAT) AS.OSUENVIRENGR: AS, Environmental Engineering, OSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:46 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Apr 9, 2024 by Megan Feagles (megan.feagles)
2. Mar 22, 2025 by Steven Soll (steven.soll)

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email

Course Prefix	BI - Biology
Course Number	234
Department	Science
Division	Arts and Sciences
Course Title	Introductory Microbiology

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	4.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Yes

Course Description

An introductory microbiology lab course required for health science and science majors. Includes characteristics, physiology and growth requirements of microorganisms, interactions between humans and microorganisms, immunology, infection, and principles of microbial control. This course emphasizes critical thinking and analytical skills in a collaborative laboratory environment.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites: BI-101, BI-112 or BI-221Z; ~~BI-211,~~ and CH-104, CH-112, ~~CH-112~~ or CH-221Z and CH-227Z ~~CH-221~~

Corequisites: BI-234L

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Summer/Fall/Winter/Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

Yes

Course Certifications

Is this a Related Instruction course?

No

Related Instruction Area

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	demonstrate the ability to communicate and comprehend basic scientific principles and concepts important to an understanding of microbiology; (SC1)
2	critically examine and assess the strengths and weaknesses of scientific theories and/or hypotheses important to an understanding of microbiology principles; (SC3)
3	apply scientific and technical modes of inquiry, including use of common electronic and lab equipment, to gather data, critically evaluate information and explore the limitations and consequences of human actions on infectious disease and disease transmission. (SC2)(SC3)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.	P
Locate, evaluate, and ethically utilize information to communicate effectively.	P
Demonstrate appropriate reasoning in response to complex issues.	P

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.	P
Respond to the needs of diverse audiences and contexts.	
Build and manage relationships.	

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.	P
Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.	P

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.	
Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.	

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.	
Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.	

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.	S
Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.	S
Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.	S

Outcome Assessment Strategies

Outcomes Assessment Strategies

Criteria
General Examination
Industry Standards
Multiple Choice Test
Pre-Post Assessment
Projects
Rubrics
Writing Assignments
Other Assessment Tools

Other Assessment Tools

Major Topic Outline "1. Overview of microorganisms and their characteristics. 2.Scientific Methodology & Measurements in microbiology. 3.Bacteria identification & classification. 4.Mutation, diversity, artificial selection and the bacterial genome. 5.Viruses & bacteriophage. 6.The dynamics of bacterial growth & nutritional requirements. 7.Bacteria metabolism and pathogenicity factors. 8.Innate and adaptive Immunity and the human immune system to microorganism. 9. Common eukaryotic pathogens in human health. 9.Antimicrobial methods."

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

BI-234 Microbiology

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

legacy class offered at all colleges. Lab credits may vary.

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

BI-234 Microbiology

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

legacy class offered at all colleges. Lab credits may vary.

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

BI-234 Microbiology

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

legacy class offered at all colleges. Lab credits may vary.

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s): BI-234 Microbiology

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

legacy class offered at all colleges. Lab credits may vary.

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s): BI-234 Microbiology

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

legacy class offered at all colleges. Lab credits may vary.

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s): BI-234 Microbiology

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

legacy class offered at all colleges. Lab credits may vary.

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s): BI-234 Microbiology

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

legacy class offered at all colleges. Lab credits may vary.

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s): BI-234 Microbiology

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

legacy class offered at all colleges. Lab credits may vary.

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:23 am

Viewing: BT-271 : Advanced Business Projects

Last approved: 11/04/23 4:51 am

Last edit: 03/24/25 7:23 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages
referencing this
course
Business Technology (BT)

Programs
referencing this
course
AAS.ADMINPRO: Administrative Professional

Justification for this

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

In Workflow

1. **Curriculum Office**
2. **DASC Curriculum Committee Outline Review Team**
3. **Curriculum Committee Approval**
4. Colleague

Approval Path

1. 03/24/25 7:46 am Megan Feagles (megan.feagles): Approved for Curriculum Office
2. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for DASC Curriculum Committee Outline Review Team

History

1. Nov 4, 2023 by Megan Feagles (megan.feagles)

Are you the Faculty Contact Person?

Faculty Contact

Course Prefix	BT - Business Technology
Course Number	271
Department	Business
Division	Arts and Sciences
Course Title	Advanced Business Projects

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Variable Credit

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	

Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

This is a capstone course for the Administrative Professional AAS. Students will utilize processes, tools, and techniques as used by an administrative professional managing a project or event. Students will practice oral and written communication as used in an office or business setting. In addition students will analyze information, problem solve, make decisions, establish priorities, and use time management skills in this capstone course that combines the knowledge and skills acquired in foundation administrative professional courses such as word processing, creating spreadsheets, creating databases, creating presentations; as well as document formatting, proofreading, and editing.

Type of Course (ACTI Code)

210 - Career Technical Preparatory

CIP Code

Select at least one of the following:

Select one of the following career areas:

Transit Population

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be

Course Requisites

Required

Prerequisites

BA-131, BA-169Z, BT-120, BT-125, BT-160, ~~BT-262,~~ and BT-262 ~~CS-135S~~

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule

Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

Yes

Course Certifications

Is this a Related Instruction course?

No

Related Instruction

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	function professionally and effectively as an individual and as a team member in a variety of situations and types of offices;

	Upon successful completion of this course, students should be able to:
2	perform a range of office procedures and generate documents such as letters, reports, forms, memos, and spreadsheets using a variety of industry-standard software and equipment;
3	utilize the integrated applications of MS Office in the creation of various projects;
4	communicate in oral and written format in a diverse office environment;
5	analyze and interpret information to make decisions that accomplish the goals of a project or planning of an event;
6	collaborate with colleagues to recognize problems, develop potential solutions, and evaluate the effectiveness of the results;
7	identify the successful qualities of an administrative professional and demonstrate awareness of the advancement opportunities of an administrative professional within this career field.

AAOT/ASOT General Education

WR: Writing Outcomes

Read actively, think critically, and write purposefully and

SP: Speech/Oral Communication Outcomes

MA: Mathematics Outcomes

AL: Arts and Letters Outcomes

SS: Social Science Outcomes

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and te

models, and solutions and generate further questions

Outcome Assessment Strategies

Major Topic Outline

1. Teamwork/collaboration. a. Mentor and assist other team members. b. Demonstrate emotional intelligence. c. Assess and strengthen personal behavior to improve team performance. d. Use influence and persuasion effectively. e. Use discretion and diplomacy. 2. Office & technical skills. a. Demonstrate accountability by meeting deadlines. b. Use efficient procedures and processes to coordinate workflow and accomplish tasks. c. Demonstrate project management skills by establishing project goals, setting appropriate timelines, establishing methods for feedback, and evaluating outcomes. d. Exhibit accuracy and attention to detail in all tasks. e. Plan and participate in meetings. f. Choose and implement document formats appropriate to the project. g. Select appropriate methods or tools to complete projects (software, communication channel). h. Prepare a variety of documents integrating multiple software applications and technology. 3. Communication & information management. a. Be resourceful in obtaining, organizing, analyzing, evaluating, and managing information. b. Utilize effective reading, writing, and listening skills. c. Compose written and electronic messages using business standards. d. Use calendaring and scheduling tools to arrange meetings. e. Complete recordkeeping tasks that are accurate and orderly. 4. Analysis, problem solving, productivity. a. Use critical thinking skills to make effective decisions and solve business problems. b. Analyze information and use good judgment when obtaining and using information. c. Recognize problems, develop solutions, and evaluate effectiveness of results. d. Manage productivity. 5. Professionalism. a. Model good work ethics and professionalism including regular and punctual attendance. b. Practice ethical principles and confidentiality. c. Demonstrate appearance and mannerisms appropriate for an office environment. d. Display a positive attitude and willingness to adapt to changes and difficult situations. e. Understand and adapt to the needs and work styles of others. f. Understand importance of professional career plans, lifelong learning, and professional organizations.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course	0

Course Transferability

Reviewer Comments

Key: 369

Preview Bridge

Course Change Request

Date Submitted: 04/02/25 6:52 am

Viewing: CH-150 : Preparatory Chemistry

Last approved: 03/29/24 3:33 am

Last edit: 04/02/25 6:52 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

Chemistry (CH)

Programs referencing this course

AAS.NURSING: Nursing (RN)

AS.PSUENGLISH: AS, English, PSU

AS.PSUGEOLOGY: AS, Geology, PSU

In Workflow

1. **Curriculum Office**
2. DASC Curriculum Committee Outline Review Team
3. Curriculum Office
4. Curriculum Committee Approval
5. Colleague

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)
2. Mar 29, 2024 by Megan Feagles (megan.feagles)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	150
Department	Science
Division	Arts and Sciences
Course Title	Preparatory Chemistry

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

One term preparatory course for students who must take the general chemistry sequence (CH-221Z, CH-222Z, CH-223Z) ~~(CH-221/222/223)~~ but have no chemistry background.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Elective Only

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

MTH-095 or placement in MTH-111Z

Corequisites

CH-150S

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall/Spring

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	perform and report calculations involving scientific measurements using appropriate techniques, including metric units, scientific notation, significant digits, and unit/dimensional analysis;
2	describe atomic structure and apply the symbolism of atoms and their particles to questions about atomic properties;
3	recognize ionic and covalent patterns of chemical bonding and use IUPAC nomenclature for simple ionic and covalent compounds;
4	balance, classify, and use chemical equations;
5	apply basic quantum theory to describe the structure of electrons in atoms;
6	apply Lewis Theory and the octet rule in the context of ionic and small molecular compounds;
7	describe the microscopic nature of solids, liquids, and gases and transitions between these phases.

Major Topic Outline

1. Algebra in problem solving 2. Scientific notation 3. Variables, units, and unit conversions 4. Density 5. Atomic structure 6. Subatomic particles and their properties 7. Names and formulas of covalent and ionic compounds 8. Isotopes and relative abundances 9. Chemical formulas and formula masses 10. Writing and balancing chemical equations 11. Types of chemical reactions 12. The mole concept 13. Mole/mass relationships 14. Stoichiometry and limiting reactants 15. Thermochemistry: heat transfer and phase changes 16. The wave nature of light 17. Electronic structure of atoms 18. Lewis theory and basics of bonding 19. Molecular shape and polarity 20. Basics of phases and phase change

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

Yes

Produce Renewable Energy

Yes

Prevent Environmental Degradation

Yes

Clean up Natural Environment

Yes

Supports Green Services

Yes

Percent of Course 100

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

How does it transfer?

general elective

Evidence of transferability

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

How does it transfer?

general elective

Evidence of transferability

OUS school to which the course will transfer

OSU - Oregon State University

Comparable
course(s)

How does it transfer?

general elective

Evidence of transferability

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable
course(s)

How does it transfer?

general elective

Evidence of transferability

OUS school to which the course will transfer

PSU - Portland State University

Comparable
course(s)

How does it transfer?

general elective

Evidence of transferability

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s)

How does it transfer?

general elective

Evidence of transferability

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s)

How does it transfer?

general elective

Evidence of transferability

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable
course(s)

How does it transfer?

general elective

Evidence of transferability

Please attach documentation

Reviewer Comments

Key: 392

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 11:52 am

Viewing: CH-221SZ ~~CH-221S~~ : General Chemistry I Seminar

Also listed as: ~~CH-221S~~

Formerly known as: CH-221S

Last approved: 11/07/23 5:00 am

Last edit: 03/26/25 9:08 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

CH-221S:

Chemistry (CH)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	221SZ ~~221S~~
Department	Science
Division	Arts and Sciences
Course Title	General Chemistry I Seminar

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 11:55 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

Grading

Grade Scheme	Non-Graded (Null)
Credit Type	Non-Transcripted Course
Allow Pass/No Pass	No
Audit	No
Min Credit	0.00
Variable Credit	No

Contact hours

Lecture	
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	11.00
Community Education/Drivers Ed	
Community Education/Adult	
Total	11
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Seminar course for CH-221Z ~~CH-221~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

CH-221Z and CH-227Z ~~CH-221 and CH-221L~~

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

Yes

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Key: 396

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 11:53 am

Viewing: CH-222SZ ~~CH-222S~~ : General Chemistry II Seminar

Also listed as: ~~CH-222S~~

Formerly known as: CH-222S

Last approved: 11/07/23 5:00 am

Last edit: 03/26/25 9:09 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

CH-222S:

Chemistry (CH)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	222SZ ~~222S~~
Department	Science
Division	Arts and Sciences
Course Title	General Chemistry II Seminar

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 11:55 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

Grading

Grade Scheme	Non-Graded (Null)
Credit Type	Non-Transcripted Course
Allow Pass/No Pass	No
Audit	No
Min Credit	0.00
Variable Credit	No

Contact hours

Lecture	
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	11.00
Community Education/Drivers Ed	
Community Education/Adult	
Total	11
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Seminar course for CH-222Z ~~CH-222~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

CH-222Z and CH-228Z ~~CH-222 and CH-222L~~

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

Yes

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Key: 399

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 11:53 am

Viewing: CH-223SZ ~~CH-223S~~ : General Chemistry III Seminar

Also listed as: ~~CH-223S~~

Formerly known as: CH-223S

Last approved: 11/07/23 5:00 am

Last edit: 03/26/25 9:10 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

CH-223S:

Chemistry (CH)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	223SZ ~~223S~~
Department	Science
Division	Arts and Sciences
Course Title	General Chemistry III Seminar

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 11:55 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

Grading

Grade Scheme	Non-Graded (Null)
Credit Type	Non-Transcripted Course
Allow Pass/No Pass	No
Audit	No
Min Credit	0.00
Variable Credit	No

Contact hours

Lecture	
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	11.00
Community Education/Drivers Ed	
Community Education/Adult	
Total	11
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Seminar course for CH-223Z ~~CH-223~~

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

CH-223Z and CH-229Z ~~CH-223 and CH-223L~~

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

Yes

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

Major Topic Outline

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

Please attach documentation

Reviewer Comments

Key: 402

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 11:54 am

Viewing: CH-241 : Organic Chemistry I

Last approved: 03/29/24 3:33 am

Last edit: 03/24/25 11:54 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

Chemistry (CH)

Programs referencing this course

AS.OSUBIOLENGR: AS, Biological Engineering, OSU
AS.TBIOLOGY: Biology (AST)
AS.OSUBIOLOGY: AS, Biology, OSU
AS.PSUBIOLOGY: AS, Biology, PSU
AS.UOBIOLOGY: AS, Biology, UofO
AS.OSUCHEMENGR: AS, Chemical Engineering, OSU

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CH - Chemistry
Course Number	241
Department	Science

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 11:55 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Oct 30, 2023 by Megan Feagles (megan.feagles)
2. Mar 29, 2024 by Megan Feagles (megan.feagles)

Division	Arts and Sciences
Course Title	Organic Chemistry I

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	5.00
Variable Credit	No

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

First term of transfer sequence meeting organic chemistry requirement for premedical, dental, veterinary, pharmacy, chiropractic medicine, chemical engineering and biology majors.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

CH-223Z and CH-229Z ~~CH-223~~

Corequisites

CH-241L and CH-241S

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	describe the structure of organic compounds using Lewis structures and elementary quantum mechanics;
2	classify organic compounds by functional group and use the basic IUPAC nomenclature conventions;
3	describe the factors that influence reaction rates and use them to explain the influence on the rate of specific features of organic reactions;
4	describe in detail the mechanisms of free radical substitution and nucleophilic substitution reactions and predict the outcomes of specific examples of these reactions;
5	devise synthetic reaction sequences to produce specific alkanes, alkenes, alkyl halides, nitriles, alcohols, and ethers;
6	use IUPAC conventions to name chiral compounds and describe the stereochemistry of the reactions learned in this course, laboratory outcomes: master the techniques of melting point determination, simple and fractional distillation, extraction, and recrystallization.

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

P

Locate, evaluate, and ethically utilize information to communicate effectively.

P

Demonstrate appropriate reasoning in response to complex issues.

S

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

P

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

P

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

P

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

C

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

C

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

C

Outcome Assessment Strategies

Outcomes Assessment Strategies

Major Topic Outline

1. Review. a. Lewis structures. b. Orbital theory. c. Acids and bases. d. Bronsted-Lowry and Lewis acid theory; acid strength. d1. Representations of molecules. d2. Condensed structural and bond-line formulas. e. Intra- and intermolecular bonding. 2. Alkanes. a. Nomenclature. b. Conformational analysis. c. Physidal properties. d. Reactions. d1. Combustion, free radical halogenation. 3. Free radical halogenation. a. Mechanism. b. Reaction rate theory, rate control of product formation. 4. Stereochemistry. a. Classes of isomerism. b. Stereoisomerism. d. Optical activity. e. Nomenclature. e1. +/- conventions; Cahn-Ingold-Prelog conventions. 5. Alkyl halides. a. Nomenclature. b. Preparation. b1. Halogenation; substitution of alcohols; substitution of alkyl halides. c. Reactions. c1. Reduction; substitution. 6. Nucleophilic substitution reactions. a. Mechanisms. b. Effects of substrate, nucleophile, leaving group, solvent. c. Solvolysis. 7. Alkenes. a. Nomenclature. b. Synthesis. b1. Elimination of alkyl halides. b2. Dehydration of alcohols.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course	0

Course Transferability

Please attach documentation

Reviewer Comments

Key: 403

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 7:24 am

Viewing: CS-250 : Discrete Structures I

Last approved: 11/16/24 5:10 am

Last edit: 03/24/25 7:24 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

Computer Science (CS)

Math Course Pathways and Prerequisites

Programs referencing this course

AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST)

AS.PSUCOMPSCI: AS, Computer Science, PSU

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	CS - Computer Science
Course Number	250

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Jun 8, 2023 by Megan Feagles (megan.feagles)
2. Mar 29, 2024 by Megan Feagles (megan.feagles)
3. Nov 16, 2024 by Jennifer Miller (jen.miller)

Department	Computer Science
Division	Arts and Sciences
Course Title	Discrete Structures I

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Yes

Course Description

Students will be introduced to discrete structures and techniques for computing. The course, which is the first in the two-term sequence, aims to convey the skills in discrete mathematics that are used in the study and practice of computer science. Topics include: Sets; Graphs and trees; Functions: properties, recursive definitions, solving recurrences; Relations: properties, equivalence, partial order; Proof techniques: inductive proof; Counting techniques and discrete probability.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Foundational Requirement

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

MTH-251Z ~~MTH-251~~

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Winter

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

MTH-231 - Elements of Discrete Mathematics

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	describe basic properties of sets, bags, tuples, relations, graphs, trees, and functions;
2	perform traversals of graphs and trees, construct simple functions by composition of known functions, determine whether simple functions are injective, surjective, or bijective, and classify simple functions by rate of growth;
3	describe the concepts of countable and uncountable sets and apply the diagonalization method to construct elements that are not in certain countable sets;
4	construct inductive definitions for sets, construct grammars for languages (sets of strings), and construct recursive definitions for functions and procedures;
5	determine whether a binary relation is reflexive, symmetric, or transitive and construct closures with respect to these properties;
6	construct a topological sort of a partially ordered set and determine whether a partially ordered set is well-founded;
7	use elementary counting techniques to count simple finite structures that are either ordered or unordered, count the worst case number of comparisons, and with discrete probability, count the average number of comparisons for simple decision trees;

	Upon successful completion of this course, students should be able to:
8	find closed form solutions for simple recurrences using the techniques of substitution, cancellation, and generating functions;
9	demonstrate standard proof techniques and the technique of inductive proof by writing short informal proofs about simple properties of numbers, sets, and ordered structures.

Major Topic Outline

1. Sets, bags, ordered structures (tuples, lists, strings, languages, relations), graphs, and trees. 2. Functions: constructions, properties, and countability. 3. Construction techniques for inductively defined sets, recursive functions and procedures, and grammars. 4. Relational structures: properties, equivalence, order, and inductive proof techniques. 5. Analysis tools: finding closed forms, counting and discrete probability, solving recurrences, comparing growth rates.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

OSU - Oregon State University

Comparable
course(s)
CS-250, MTH-231

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable
course(s)
CS-250, MTH-231

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

PSU - Portland State University

Comparable
course(s)
CS-250, MTH-231

How does it transfer?

required or support for major

Evidence of transferability

Course Change Request

Date Submitted: 03/24/25 7:24 am

Viewing: ENGR-201 : Electrical Fundamentals

Last approved: 02/08/25 5:31 am

Last edit: 03/24/25 7:24 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

Engineering (ENGR)

Programs referencing this course

AS.OSUINDENG: AS, Industrial Engineering, OSU
AS.OSUBIOLENGR: AS, Biological Engineering, OSU
AS.OITMECHENGR: AS, Mechanical Engineering, OIT
AS.PSUMECHENGR: AS, Mechanical Engineering, PSU
AS.OSUARCHENGR: AS, Architectural Engineering, OSU
AS.OSUCHEMENGR: AS, Chemical Engineering, OSU

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	ENGR - Engineering
Course Number	201

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Oct 3, 2023 by Megan Feagles (megan.feagles)
2. Mar 29, 2024 by Megan Feagles (megan.feagles)
3. Feb 8, 2025 by Eric Lee (elee)

Department	Engineering Sciences
Division	Arts and Sciences
Course Title	Electrical Fundamentals

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Yes

Course Description

A study of basic electrical circuit theory. Analysis of voltage and current relationships. Covers circuit parameters of resistance, inductance, and capacitance. Includes basic DC, AC, and natural response of circuits. This course is not intended for Electrical or Computer Engineering majors.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Foundational Requirement

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

MTH-252Z ~~MTH-252~~

Corequisites

ENGR-201L

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule

Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Spring

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	define voltage, current, power, and energy;
2	demonstrate Ohm's Law, Kirchhoff's Current Law, and Kirchhoff's Voltage Law;
3	identify ideal voltage and current sources;
4	solve for unknown currents and voltages in any resistive circuit;
5	explain Thevenin Equivalents and their use in maximum power transfer calculations;
6	define current and voltage relationships for capacitors and inductors;
7	solve for unknown currents and voltages in passive circuit elements using phasors;
8	calculate input and output parameters for ideal transformer circuits;
9	calculate the time response of first-order circuits containing inductors and capacitors;
10	demonstrate the use of basic electrical equipment.

Major Topic Outline

• Introduction, Circuit Variables • Circuit Elements and Basic Laws • DC Circuit Analysis • Resistive Circuits • Thévenin Equivalent Circuits, Superposition • Capacitors and Inductors • First-Order Transient Circuits • AC Circuit Analysis with Phasors • AC Power • Ideal Transformers

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

ENGR 236

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://ssb-prod.ec.oit.edu/PROD/oitcas_web.p_DispEquivalencies

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OUS school to which the course will transfer

OSU - Oregon State University

Comparable
course(s)
ENGR 201

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://admissions.oregonstate.edu/course-equivalencies-clackamas-community-college

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OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable
course(s)
ENGR 201

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://admissions.oregonstate.edu/course-equivalencies-clackamas-community-college

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OUS school to which the course will transfer

PSU - Portland State University

Comparable
course(s)
ECE 241

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://www.pdx.edu/engineering/transfer-guides
https://www.transferology.com/index.htm

Please attach documentation

Reviewer Comments

Key: 681

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 7:25 am

Viewing: ENGR-211 : Statics

Last approved: 11/02/24 6:51 am

Last edit: 03/24/25 7:25 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages
referencing this
course
Engineering (ENGR)

Programs
referencing this
course
AS.OSUINDENG: AS, Industrial Engineering, OSU
AS.OSUBIOLENGR: AS, Biological Engineering, OSU
AS.OITMECHENGR: AS, Mechanical Engineering, OIT
AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU
AS.PSUMECHENGR: AS, Mechanical Engineering, PSU
AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT
AS.OSUARCHENGR: AS, Architectural Engineering, OSU
AS.OSUCHEMENGR: AS, Chemical Engineering, OSU
AS.OSUCIVILENGR: AS, Civil Engineering, OSU
AS.PSUCIVILENGR: AS, Civil Engineering, PSU
AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU
AS.OSUECOLENGR: AS, Ecological Engineering, OSU
AS.OSUENVIRENGR: AS, Environmental Engineering, OSU
AS.PSUENVIRENGR: AS, Environmental Engineering, PSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Oct 3, 2023 by Megan Feagles (megan.feagles)
2. Nov 2, 2024 by Eric Lee (elee)

Justification for this

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact

Course Prefix	ENGR - Engineering
Course Number	211
Department	Engineering Sciences
Division	Arts and Sciences
Course Title	Statics

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Variable Credit

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	

Seminar

Community Education/Drivers Ed

Community Education/Adult

Total 44

Proposed Effective Term Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Yes

Course Description

First term of engineering mechanics sequence. This course focuses on the analysis of forces acting on structures and machines under equilibrium conditions.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Foundational Requirement

Select one of the following career areas:

Transfer Baccalaureate

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be

Course Requisites

Required

Prerequisites

MTH-252Z ~~MTH-252~~

Corequisites

Prerequisites or Corequisites

PH-211

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Related Instruction

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	create appropriate Free body diagrams;
2	determine resultant and reaction vectors for two and three dimensional force and moment systems;
3	calculate unknown internal forces and moments in beams, trusses, frames, and machines for systems in equilibrium;
4	demonstrate appropriate engineering problem solving and presentation skills (i.e. given-find-solution).

AAOT/ASOT General Education

WR: Writing Outcomes

Read actively, think critically, and write purposefully and c

SP: Speech/Oral Communication Outcomes

MA: Mathematics Outcomes

AL: Arts and Letters Outcomes

SS: Social Science Outcomes

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and tecl
models, and solutions and generate further questions

Outcome Assessment Strategies

Major Topic Outline

1. General Engineering Principles. 2. Force Vectors. 3. Equilibrium of a Particle. 4. Force System Resultants. 5. Equilibrium of a Rigid Body. 6. Structural Analysis. 7. Internal Forces. 8. Friction. 9. Center of Gravity and Centroids. 10. Engineering Design

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

ENGR 211

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://ssb-prod.ec.oit.edu/PROD/oitcas_web.p_DispEquivalencies

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OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

ENGR 211

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://admissions.oregonstate.edu/course-equivalencies-clackamas-community-college

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OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

ENGR 211

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://admissions.oregonstate.edu/course-equivalencies-clackamas-community-college

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OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

EAS 211

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://www.transferology.com/index.htm

Course Change Request

Date Submitted: 03/24/25 7:25 am

Viewing: ENGR-221 : Electrical Circuit Analysis I

Last approved: 02/08/25 5:31 am

Last edit: 03/24/25 7:25 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	Engineering (ENGR)
Programs referencing this course	AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT AS.PSUCOMPENGR: AS, Computer Engineering, PSU AS.OITELECENGR: AS, Electrical Engineering, OIT AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AS.PSUELECTENGR: AS, Electrical Engineering, PSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Sep 30, 2023 by Megan Feagles (megan.feagles)
2. Mar 29, 2024 by Megan Feagles (megan.feagles)
3. Feb 8, 2025 by Michael Farrell (mike.farrell)

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email

Course Prefix	ENGR - Engineering
Course Number	221
Department	Engineering Sciences
Division	Arts and Sciences
Course Title	Electrical Circuit Analysis I

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	No
CEU's	
Min Credit	4.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	

Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Designed to give the student a thorough understanding of basic electrical circuit theory, this course covers voltage and current relationships and fundamental methods of circuit analysis. Electrical circuit parameters such as resistance, inductance, and capacitance will be examined through theory and laboratory experiments.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Foundational Requirement

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites	MTH-252Z ~~MTH-252~~
Corequisites	ENGR-221L

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

ENGR-112

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Related Instruction Area

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	explain how currents and voltages are produced and illustrate the mathematical and scientific relationship between them;
2	apply the basic laws of electrical circuits;
3	solve and design basic electrical systems using various circuit analysis techniques.

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific

Outcome Assessment Strategies

Outcomes Assessment Strategies

Other Assessment Tools

Major Topic Outline	1. Circuit Variables. 2. Circuit Elements. 3. Simple Resistive Circuits. 4. Techniques of Circuit Analysis. 5. The Operational Amplifier. 6. Inductors and Capacitors. 7. Response of First Order RL and RC Circuits.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

EE 221

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://ssb-prod.ec.oit.edu/PROD/oitcas_web.p_DispEquivalencies

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OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

ENGR 201

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://admissions.oregonstate.edu/course-equivalencies-clackamas-community-college

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OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

ENGR 201

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://admissions.oregonstate.edu/course-equivalencies-clackamas-community-college

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OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s): ECE 221

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://www.pdx.edu/engineering/transfer-guides#ece
https://www.transferology.com/index.htm

Please attach documentation

Reviewer Comments

Key: 686

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 11:53 am

Viewing: ENGR-231 : Properties of Materials

Last approved: 11/16/24 5:10 am

Last edit: 03/24/25 11:53 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

Engineering (ENGR)

Programs referencing this course

AS.OITMECHENGR: AS, Mechanical Engineering, OIT

AS.PSUMECHENGR: AS, Mechanical Engineering, PSU

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	ENGR - Engineering
Course Number	231
Department	Engineering Sciences
Division	Arts and Sciences
Course Title	Properties of Materials

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 11:55 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Oct 3, 2023 by Megan Feagles (megan.feagles)
2. Nov 16, 2024 by Eric Lee (elee)

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	4.00
Variable Credit	No

Contact hours

Lecture	33.00
Lec/Lab	
Lab	33.00
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	66
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Yes

Course Description

This course is an introduction to materials science, a field that describes the behavior of materials by utilizing principles of chemistry and physics to engineer new materials and predict their resultant properties. Materials processing methods and the resulting microscopic structures and macroscopic thermal, electrical, and mechanical properties will be investigated.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Foundational Requirement

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

CH-221Z and CH-227Z ~~CH-221~~

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Winter

Will this class use library resources?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	predict basic physical properties of materials based on their elemental composition and type of chemical bonding;
2	interpret the nomenclature of Bravais lattices and Miller indices to describe the structure of crystalline materials;
3	characterize the kinetics of phase transformations in metal alloys by applying the principles of solid state diffusion and nucleation theory;
4	describe the compositions, phases, and microstructure of binary solid systems after heat treatment based on the binary phase diagram.

Major Topic Outline

1. Atomic Structure and Bonding 2. Structure of Crystalline Solids 3. Diffusion 4. Defects 5. Mechanical Properties. 6. Failure Analysis 7. Phase Diagrams 8. Composites

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

	No
Percent of Course	0

Course Transferability

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

MECH 260 (Engineering Materials I)

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

https://ssb-prod.ec.oit.edu/PROD/oitcas_web.p_DispEquivalencies

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

ME 213 (Properties of Materials)

How does it transfer?

required or support for major

Evidence of transferability

Other. Please explain.

Course Change Request

Date Submitted: 03/24/25 7:25 am

Viewing: MTH-231 : Elements of Discrete Mathematics

Last approved: 04/06/24 3:21 am

Last edit: 03/24/25 7:25 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	Math Course Pathways and Prerequisites Mathematics (MTH) Related Instruction
Programs referencing this course	AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Jun 8, 2023 by Megan Feagles (megan.feagles)
2. Apr 6, 2024 by Kelly Mercer (kelly.mercer)

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email	
Course Prefix	MTH - Mathematics
Course Number	231
Department	Mathematics
Division	Academic Foundations and Connections (AFAC)

Course Title	Elements of Discrete Mathematics

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	4.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

Students will be introduced to discrete structures and techniques for computing. The course, which is the first in the two-term sequence, aims to convey the skills in discrete mathematics that are used in the study and practice of computer science. Topics include: Sets; Graphs and Trees; Functions: properties, recursive definitions, solving recurrences; Relations: properties, equivalence, partial order; Proof techniques: inductive proof; Counting techniques and discrete probability.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Foundational Requirement

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites MTH-251Z ~~MTH-251~~

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Winter

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Related Instruction Area

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

CS-250 - Discrete Structures I

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	describe basic properties of sets, bags, tuples, relations, graphs, trees, and functions;

	Upon successful completion of this course, students should be able to:
2	perform traversals of graphs and trees, construct simple functions by composition of known functions, determine whether simple functions are injective, surjective, or bijective, and classify simple functions by rate of growth;
3	describe the concepts of countable and uncountable sets and apply the diagonalization method to construct elements that are not in certain countable sets;
4	construct inductive definitions for sets, construct grammars for languages (sets of strings), and construct recursive definitions for functions and procedures;
5	determine whether a binary relation is reflexive, symmetric, or transitive and construct closures with respect to these properties;
6	construct a topological sort of a partially ordered set and determine whether a partially ordered set is well-founded;
7	use elementary counting techniques to count simple finite structures that are either ordered or unordered, count the worst case number of comparisons, and with discrete probability, count the average number of comparisons for simple decision trees;
8	find closed form solutions for simple recurrences using the techniques of substitution, cancellation, and generating functions;
9	demonstrate standard proof techniques and the technique of inductive proof by writing short informal proofs about simple properties of numbers, sets, and ordered structures.

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

Other Assessment Tools

Major Topic Outline	1. Sets, bags, ordered structures (tuples, lists, strings, languages, relations), graphs, and trees. 2. Functions: constructions, properties, and countability. 3. Construction techniques for inductively defined sets, recursive functions and procedures, and grammars. 4. Relational structures: properties, equivalence, order, and inductive proof techniques. 5. Analysis tools: finding closed forms, counting and discrete probability, solving recurrences, comparing growth rates.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s) MTH-231, MATH-231

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s) MTH-231, MATH-231

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s) MTH-231, MATH-231

How does it transfer?

required or support for major

Evidence of transferability

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:27 am

Viewing: MTH-254 : Vector Calculus

Last approved: 03/29/24 3:36 am

Last edit: 03/24/25 7:27 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

- Mathematics (MTH)
- Physics (PH)

Programs referencing this course

- AS.OSUINDENG: AS, Industrial Engineering, OSU
- AS.OSUBIOLENGR: AS, Biological Engineering, OSU
- AS.OITMECHENGR: AS, Mechanical Engineering, OIT
- AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU
- AS.PSUMECHENGR: AS, Mechanical Engineering, PSU
- AS.PSUMUSIC: AS, Music, PSU
- NA.OTM: Oregon Transfer Module
- AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT
- AS.OSUARCHENGR: AS, Architectural Engineering, OSU
- NA.CTM: Core Transfer Map
- AS.OSUCHEMENGR: AS, Chemical Engineering, OSU
- AS.OSUCIVILENGR: AS, Civil Engineering, OSU
- AS.PSUCIVILENGR: AS, Civil Engineering, PSU
- AS.OSUECOLENGR: AS, Ecological Engineering, OSU
- AS.OITELECENGR: AS, Electrical Engineering, OIT
- AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU
- AS.PSUELECTENGR: AS, Electrical Engineering, PSU
- AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT)
- AGS.GENERAL: Associate of General Studies
- AS.OSUENVIRENGR: AS, Environmental Engineering, OSU
- AS.PSUENVIRENGR: AS, Environmental Engineering, PSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Sep 30, 2023 by Megan Feagles (megan.feagles)
2. Mar 29, 2024 by Megan Feagles (megan.feagles)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	MTH - Mathematics
Course Number	254
Department	Mathematics
Division	Academic Foundations and Connections (AFAC)
Course Title	Vector Calculus

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	5.00
Variable Credit	No

Contact hours

Lecture	55.00
Lec/Lab	
Lab	
Activity	
Clinical	

Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	55
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

This course is an introduction to the study of vectors and analytic geometry in three-space, the calculus of vector-valued functions, and the calculus of several variables.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Foundational Requirement

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

MTH-252Z ~~MTH-252~~ with a C or better

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog: No

When do you plan to offer this course?

Summer/Fall/Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

Yes

Related Instruction Area: Computation

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Mathematics

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	apply and interpret vector notation; (MA2)
2	calculate and interpret vector dot-product and vector cross-product; (MA1)(MA2)
3	determine the equations of lines and planes in 3 space; (MA1)(MA2)
4	calculate the derivative of vector valued functions, arc length, partial derivatives, gradient, directional derivatives; (MA1)(MA2)

	Upon successful completion of this course, students should be able to:
5	calculate multiple integrals and line integrals; (MA1)(MA2)
6	apply the major theorems of vector calculus: the fundamental theorem of line integrals, the divergence theorem, Stoke's theorem, and Green's theorem. (MA1) (MA2)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Presentations
Projects
Rubrics
Other Assessment Tools

Other Assessment Tools

Major Topic Outline

1. Vector dot-product, cross-product, Lines, Planes, Surfaces in space. 2. Cylindrical and spherical coordinates. 3. Curves in space (vector functions and their derivatives). 4. Arc length. 5. Partial derivatives, tangent planes, differentials. 6. Multivariate chain rules, directional derivatives, gradients. 7. Line integrals,multiple integrals, surface integrals. 8. Divergence and the divergence theorem. 9. Vector curl. 10. Green's theorem, Stoke's theorem, Divergence theorem

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable
course(s)
MTH 254

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable
course(s)
MTH 254

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

OSU - Oregon State University

Comparable
course(s)
MTH 254

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

MTH 254

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

MTH 254

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s)

MTH 254

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

UO - University of Oregon

Comparable
course(s)

MTH 254

How does it transfer?

required or support for major

Evidence of transferability

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable
course(s)

MTH 254

How does it transfer?

required or support for major

Evidence of transferability

Please attach documentation

Course Change Request

Date Submitted: 03/24/25 7:27 am

Viewing: MTH-256 : Differential Equations

Last approved: 09/30/23 4:41 am

Last edit: 03/24/25 7:27 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	Engineering (ENGR) Mathematics (MTH)
Programs referencing this course	AS.OSUINDENG: AS, Industrial Engineering, OSU AS.OSUBIOLENGR: AS, Biological Engineering, OSU AS.OITMECHENGR: AS, Mechanical Engineering, OIT AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.PSUMECHENGR: AS, Mechanical Engineering, PSU AS.PSUMUSIC: AS, Music, PSU NA.OTM: Oregon Transfer Module AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT AS.OSUARCHENGR: AS, Architectural Engineering, OSU NA.CTM: Core Transfer Map AS.OSUCHEMENGR: AS, Chemical Engineering, OSU AS.OSUCIVILENGR: AS, Civil Engineering, OSU AS.PSUCIVILENGR: AS, Civil Engineering, PSU AS.PSUCOMPENGR: AS, Computer Engineering, PSU AS.OSUECOLENGR: AS, Ecological Engineering, OSU AS.OITELECENGR: AS, Electrical Engineering, OIT AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AS.PSUELECTENGR: AS, Electrical Engineering, PSU AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AGS.GENERAL: Associate of General Studies AS.OSUENVIRENGR: AS, Environmental Engineering, OSU AS.PSUENVIRENGR: AS, Environmental Engineering, PSU AS.PSUGEOLOGY: AS, Geology, PSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Sep 30, 2023 by Megan Feagles (megan.feagles)

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email	
Course Prefix	MTH - Mathematics
Course Number	256
Department	Mathematics
Division	Academic Foundations and Connections (AFAC)
Course Title	Differential Equations

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	No
CEU's	
Min Credit	4.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44

Proposed Effective Term: Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

This course is an introduction to the study of first-order differential equations, first-order systems of differential equations, linear systems of differential equations, and applications of these topics.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites: MTH-252Z ~~MTH-252~~ with a C or better

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Summer/Winter

Will this class use library resources?

No

Have you talked with a librarian regarding that impact?

Course Certifications

Is this a Related Instruction course?

Yes

Related Instruction Area: Computation

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Mathematics

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	utilize problem-solving techniques to engage problems without being provided a template; (MA1)(MA2)
2	collaborate effectively within a group to communicate mathematics; (MA2)
3	read and interpret mathematical information; (MA2)
4	communicate mathematical information in lay-language; (MA2)
5	model and solve real situations via differential equations and systems; (MA1)(MA2)
6	solve and approximate solutions to differential equations and systems using analytic, numeric, and graphical methods. (MA1)(MA2)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination

Other Assessment Tools

Other Assessment Tools

Major Topic Outline	1. First-order differential equations a. Modeling b. Separation of variables c. Slope fields d. Euler's method e. Equilibria and the phase line f. Linear differential equations 2. First-order systems of differential equations a. Modeling via systems b. The geometry of systems c. Analytic methods for special systems d. Euler's method for systems 3. Linear systems of differential equations a. Properties b. Straight-line solutions c. Phase planes for systems with real eigenvalues d. Complex eigenvalues e. Repeated and zero eigenvalues f. Second-order linear equations g. Damped simple harmonic motion h. The trace-determinant plane 4. Forcing and resonance a. Forced oscillators b. Sinusoidal oscillators c. Undamped forcing and resonance 5. Laplace transforms a. Laplace transforms introduction b. Discontinuous functions c. Second-order equations

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

PSU: MTH256 UO: MATH256

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Because it is listed as a general education course for the AAOT, it will transfer to all state universities in Oregon.

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

PSU: MTH256 UO: MATH256

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Because it is listed as a general education course for the AAOT, it will transfer to all state universities in Oregon.

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

PSU: MTH256 UO: MATH256

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Because it is listed as a general education course for the AAOT, it will transfer to all state universities in Oregon.

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

PSU: MTH256 UO: MATH256

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Because it is listed as a general education course for the AAOT, it will transfer to all state universities in Oregon.

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

PSU: MTH256 UO: MATH256

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Because it is listed as a general education course for the AAOT, it will transfer to all state universities in Oregon.

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s)

PSU: MTH256 UO: MATH256

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Because it is listed as a general education course for the AAOT, it will transfer to all state universities in Oregon.

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s): PSU: MTH256 UO: MATH256

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Because it is listed as a general education course for the AAOT, it will transfer to all state universities in Oregon.

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s): PSU: MTH256 UO: MATH256

How does it transfer?

general education or distribution requirement
general elective
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

Because it is listed as a general education course for the AAOT, it will transfer to all state universities in Oregon.

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:27 am

Viewing: MTH-261 : Linear Algebra

Last approved: 09/30/23 4:41 am

Last edit: 03/24/25 7:27 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	Mathematics (MTH)
Programs referencing this course	AS.OITMECHENGR: AS, Mechanical Engineering, OIT AS.PSUMECHENGR: AS, Mechanical Engineering, PSU AS.PSUMUSIC: AS, Music, PSU NA.OTM: Oregon Transfer Module AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT NA.CTM: Core Transfer Map AS.PSUCIVILENGR: AS, Civil Engineering, PSU AS.PSUCOMPENGR: AS, Computer Engineering, PSU AS.PSUCOMPSCI: AS, Computer Science, PSU AS.OITELECENGR: AS, Electrical Engineering, OIT AS.PSUELECTENGR: AS, Electrical Engineering, PSU AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AGS.GENERAL: Associate of General Studies AS.PSUENVIRENGR: AS, Environmental Engineering, PSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Sep 30, 2023 by Megan Feagles (megan.feagles)

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email

Course Prefix MTH - Mathematics

Course Number 261

Department Mathematics

Division

Academic Foundations and Connections (AFAC)	
Course Title	Linear Algebra

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	4.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	44.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	44
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

This course is an introduction to linear analysis of n-space: systems of linear equations, vectors, matrices, matrix operations, linear transformations, linear independence, span, bases, subspaces, determinants, eigenvalues, eigenvectors, inner products, diagonalization, and applications of these topics.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

Yes

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites MTH-252Z ~~MTH-252~~ with a C or better

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

WRD-098 or placement in WR-121Z

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Summer/Fall/Spring

Will this class use library resources?

No

Have you talked with a librarian regarding that impact?

Course Certifications

Is this a Related Instruction course?

Yes

Related Instruction Area: Computation

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Mathematics

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	use the row-echelon form of a matrix to draw conclusions about a given system of equations or set of vectors;

	Upon successful completion of this course, students should be able to:
2	interpret properties of vectors geometrically, including dimensions of surfaces, orthogonality, and norms;
3	demonstrate understanding of subspaces of Rn as well as general vector spaces;
4	perform matrix operations, including inverses, determinants, and finding eigenspaces;
5	apply principles of matrix algebra to linear transformations, including finding nullspaces and rangespaces.

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination

Other Assessment Tools

Major Topic Outline

1. Linear equations in linear algebra. a. Systems of linear equations. b. Row reduction and echelon forms. c. Vector equations. d. The matrix equation . e. Solution sets of linear systems. f. Applications of linear systems. g. Linear independence. h. Introduction to linear transformations. i. The matrix of a linear transformation. 2. Matrix algebra. a. Matrix operations. b. The inverse of a matrix. c. Characterizations of invertible matrices. d. Applications to computer graphics. e. Subspaces of . f. Dimension and rank. 3. Determinants. a. Introduction to determinants. b. Properties of determinants. c. Cramer's rule, volume, and linear transformations.. 4. Eigenvalues and eigenvectors. a. Eigenvectors and eigenvalues. b. The characteristic equation. c. Diagonalization. d. Markov chains. 5. Orthogonality. a. Inner product, length, and orthogonality. b. Orthogonal sets. 6. Introduction to general vector spaces. a. Vector spaces in settings other than Rn (particularly function spaces).

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course

0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)
EOU: MATH LDT (lower division transfer credit) PSU: MATH 261 OIT: MATH 341 (but not towards upper division) SOU: MATH 261 OSU: MATH LDT (lower division transfer credit) UO: MATH 227T (lower division transfer credit) WOU: MATH 2XX (lower division transfer credit)

How does it transfer?
other (provide details)

Details of how course transfers
Depends on the school - see above.

Evidence of transferability
Correspondence with receiving institution (mail, fax, email, etc.)
Other. Please explain.

Explanation of other evidence of transferability
Corresponded with each school and checked the transfer equivalency tools available on most Oregon university websites.

OUS school to which the course will transfer
OIT - Oregon Institute of Technology

Comparable course(s)
EOU: MATH LDT (lower division transfer credit) PSU: MATH 261 OIT: MATH 341 (but not towards upper division) SOU: MATH 261 OSU: MATH LDT (lower division transfer credit) UO: MATH 227T (lower division transfer credit) WOU: MATH 2XX (lower division transfer credit)

How does it transfer?
other (provide details)

Details of how course transfers
Depends on the school - see above.

Evidence of transferability
Correspondence with receiving institution (mail, fax, email, etc.)
Other. Please explain.

Explanation of other evidence of transferability
Corresponded with each school and checked the transfer equivalency tools available on most Oregon university websites.

OUS school to which the course will transfer
OSU - Oregon State University

Comparable course(s)
EOU: MATH LDT (lower division transfer credit) PSU: MATH 261 OIT: MATH 341 (but not towards upper division) SOU: MATH 261 OSU: MATH LDT (lower division transfer credit) UO: MATH 227T (lower division transfer credit) WOU: MATH 2XX (lower division transfer credit)

How does it transfer?
other (provide details)

Details of how course transfers
Depends on the school - see above.

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)
Other. Please explain.

Explanation of other evidence of transferability

Corresponded with each school and checked the transfer equivalency tools available on most Oregon university websites.

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

EOU: MATH LDT (lower division transfer credit) PSU: MATH 261 OIT: MATH 341 (but not towards upper division) SOU: MATH 261 OSU: MATH LDT (lower division transfer credit) UO: MATH 227T (lower division transfer credit) WOU: MATH 2XX (lower division transfer credit)

How does it transfer?

other (provide details)

Details of how course transfers

Depends on the school - see above.

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)
Other. Please explain.

Explanation of other evidence of transferability

Corresponded with each school and checked the transfer equivalency tools available on most Oregon university websites.

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

EOU: MATH LDT (lower division transfer credit) PSU: MATH 261 OIT: MATH 341 (but not towards upper division) SOU: MATH 261 OSU: MATH LDT (lower division transfer credit) UO: MATH 227T (lower division transfer credit) WOU: MATH 2XX (lower division transfer credit)

How does it transfer?

other (provide details)

Details of how course transfers

Depends on the school - see above.

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)
Other. Please explain.

Explanation of other evidence of transferability

Corresponded with each school and checked the transfer equivalency tools available on most Oregon university websites.

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s): EOU: MATH LDT (lower division transfer credit) PSU: MATH 261 OIT: MATH 341 (but not towards upper division) SOU: MATH 261 OSU: MATH LDT (lower division transfer credit) UO: MATH 227T (lower division transfer credit) WOU: MATH 2XX (lower division transfer credit)

How does it transfer?

other (provide details)

Details of how course transfers

Depends on the school - see above.

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)
Other. Please explain.

Explanation of other evidence of transferability

Corresponded with each school and checked the transfer equivalency tools available on most Oregon university websites.

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s): EOU: MATH LDT (lower division transfer credit) PSU: MATH 261 OIT: MATH 341 (but not towards upper division) SOU: MATH 261 OSU: MATH LDT (lower division transfer credit) UO: MATH 227T (lower division transfer credit) WOU: MATH 2XX (lower division transfer credit)

How does it transfer?

other (provide details)

Details of how course transfers

Depends on the school - see above.

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)
Other. Please explain.

Explanation of other evidence of transferability

Corresponded with each school and checked the transfer equivalency tools available on most Oregon university websites.

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s): EOU: MATH LDT (lower division transfer credit) PSU: MATH 261 OIT: MATH 341 (but not towards upper division) SOU: MATH 261 OSU: MATH LDT (lower division transfer credit) UO: MATH 227T (lower division transfer credit) WOU: MATH 2XX (lower division transfer credit)

How does it transfer?

other (provide details)

Details of how course transfers

Depends on the school - see above.

Evidence of transferability

Correspondence with receiving institution (mail, fax, email, etc.)
Other. Please explain.

Explanation of other evidence of transferability

Corresponded with each school and checked the transfer equivalency tools available on most Oregon university websites.

Please attach documentation

Reviewer Comments

Key: 1141

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 7:28 am

Viewing: MTH-275 : A Bridge to University Mathematics

Last approved: 06/09/23 5:25 am

Last edit: 03/24/25 7:28 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	Math Course Pathways and Prerequisites Mathematics (MTH)

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:47 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Jun 9, 2023 by Megan Feagles (megan.feagles)

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email	
Course Prefix	MTH - Mathematics
Course Number	275
Department	Mathematics
Division	Academic Foundations and Connections (AFAC)
Course Title	A Bridge to University Mathematics

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	3.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

This is a bridge course designed to help students transition from computation-based mathematics to the more proof-based curriculum typical of junior and senior collegiate-level mathematics courses. Students will construct and validate proofs, explore the nature of mathematics, and navigate some of the systems and conventions used within the mathematics community. May be repeated for up to 6 credits.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Elective Only

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

Yes

Up to how many credits can this course be repeated to satisfy a degree requirement? 6

Course Requisites

Required

Prerequisites MTH-251Z ~~MTH-251~~

Corequisites

Prerequisites or Corequisites

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Not Offered Every Term

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

Yes

Related Instruction Area: Computation

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	develop and negotiate mathematical conventions to communicate ideas;
2	provide informal arguments to support or refute conjectures;

	Upon successful completion of this course, students should be able to:
3	refine informal arguments to produce mathematical proofs;
4	use axioms to verify the existence or nonexistence of mathematical objects.

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Outcome Assessment Strategies

Outcomes Assessment Strategies

Other Assessment Tools

Major Topic Outline	1. Mathematical conventions 2. Axiomatic-deductive systems 3. Proof validation 4. Proof construction

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

How does it transfer?

general elective
other (provide details)

Details of how course transfers

LD Elective for Math Minor (UO and OSU only)

Evidence of transferability

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

How does it transfer?

general elective
other (provide details)

Details of how course transfers

LD Elective for Math Minor (UO and OSU only)

Evidence of transferability

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s)

How does it transfer?

general elective
other (provide details)

Details of how course transfers

LD Elective for Math Minor (UO and OSU only)

Evidence of transferability

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:28 am

Viewing: PH-150 : Preparatory Physics

Last approved: 11/07/23 5:04 am

Last edit: 03/24/25 7:28 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

Physics (PH)

Credits/Hours/Instructional Method Change

Is Topic Shell Course?

Are you the Faculty Contact Person?

Course Prefix	PH - Physics
Course Number	150
Department	Science
Division	Arts and Sciences
Course Title	Preparatory Physics

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:48 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
Min Credit	3.00
Variable Credit	No

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

This course is intended for students who have not completed high-school physics, but are intending to take either PH-201 or PH-211. Students will develop reasoning skills, and learn problem-solving strategies, measurement units, graph interpretation, and basic physics definitions needed for their General Physics courses.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

Select at least one of the following:

Elective Only

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Course Requisites

Required

Prerequisites

Corequisites

Prerequisites or Corequisites

MTH-112Z or placement in MTH-251Z ~~MTH-251~~

Recommended

Prerequisites

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Spring

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Are you going to seek General Education Certification after course approval?

No

General Education Outcome(s)

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	apply proven techniques/strategies to arrive at solutions to challenging problems;
2	apply specific study skills and methods which promote both a deep understanding and the organization of knowledge into a cohesive structure;
3	explain their reasoning for a solution and draw conclusions from principles and definitions using a logical sequence of definitions and principles;
4	apply their algebra and trigonometry skills to physical situations, and assign and interpret scientific meaning for mathematical variables and expressions;
5	explain measurements and unit conversions, and successfully convert between measurement units, especially the SI units of measure;
6	interpret graphs of physical/realistic variables, explain the relations between the variables, and describe the conceptual meanings of both the slope and the area under the curve.

Major Topic Outline

Units and measurements, graph interpretation, basic physics terms, definitions and algebraic representations, introduction to kinematics, strategies for problem solving and effective thinking.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

How does it transfer?

general elective

Evidence of transferability

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:28 am

Viewing: PH-201 : General Physics

Last approved: 11/07/23 5:04 am

Last edit: 03/24/25 7:28 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

Physics (PH)

Programs referencing this course

AS.PSUMUSIC: AS, Music, PSU
AS.TBIOLOGY: Biology (AST)
AS.OSUBIOLOGY: AS, Biology, OSU
NA.OTM: Oregon Transfer Module
AS.PSUBIOLOGY: AS, Biology, PSU
AS.UOBIOLOGY: AS, Biology, UofO
AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST)
AS.TBUSINESS: Business (AST)
NA.CTM: Core Transfer Map
AS.PSUCOMPSCI: AS, Computer Science, PSU
AAS.ELECTRONENGTECH: Electronics Engineering Technology
AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT)
AA.OTELEMED: Elementary Education (AAOT)
AS.PSUENGLISH: AS, English, PSU
AGS.GENERAL: Associate of General Studies
AA.ENGLIT: English Literature (AAT)
AS.PSUGEOLOGY: AS, Geology, PSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:48 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Nov 7, 2023 by Megan Feagles (megan.feagles)

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email

Course Prefix	PH - Physics
Course Number	201
Department	Science
Division	Arts and Sciences
Course Title	General Physics

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes

CEU's

Min Credit	5.00
Variable Credit	No

Max Credit Variable Credit Increment

Contact hours

Lecture	33.00
Lec/Lab	

Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit i combination of in-class and out-of-class activity.

Course Description

A lab course covering vectors, motion, kinematics, forces and Newton's laws, gravity, the conservation laws for momentum and energy, rotational motion, and oscillations.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites

WRD-090 with a C or better or placement in WRD-098. MTH-112Z or placement in MTH-251Z ~~MTH-251~~

Corequisites

PH-201L and PH-201S

Prerequisites or Corequisites

Recommended

Prerequisites

A year of high-school physics or PH-150

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Related Instruction Area

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	analyze observed phenomenon in everyday life by applying conceptual understanding of the physics of classical mechanics; (SC1)
2	apply scientific investigation and inquiry to understand real-world events and scenarios that they have not encountered previously; (SC2)
3	solve many different types of problems dealing with kinematics, dynamics, and conservation laws; (SC1)(SC2)
4	solve problems and present their work to their peers; (SC1)
5	work collaboratively to solve problems (seminar) and investigate physical phenomenon through experimentation and inquiry (laboratory); (SC2)
6	think critically about new information presented to them, and examine the extent to which it fits within their current understanding of physical laws; (SC3)
7	use technology to conduct detailed investigations and measurements of prototypical physical phenomenon and discuss how experimental results relate to theoretical expectations. (SC1)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

P

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

P

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

S

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

S

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

S

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Journal Writing
Writing Assignments

Other Assessment Tools

Major Topic Outline

1. Units and vectors. 2. Kinematics. 3. Forces and Newton's laws of motion. 4. Conservation laws. a. Energy and work. b. Impulse and momentum. 5. Rotational motion. 6. Oscillations.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

EOU - Eastern Oregon University

Comparable course(s)

General Physics

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists. (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

General Physics

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists. (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

OSU - Oregon State University

Comparable
course(s)
General Physics

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists. (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable
course(s)
General Physics

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists. (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

PSU - Portland State University

Comparable
course(s)

General Physics

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists. (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable
course(s)

General Physics

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists. (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

UO - University of Oregon

Comparable
course(s)

General Physics

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists. (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable
course(s)

General Physics

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists. (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

Please attach documentation

Reviewer Comments

Key: 1333

Preview Bridge

Course Change Request

Date Submitted: 03/24/25 7:29 am

Viewing: PH-211 : General Physics With Calculus

Last approved: 09/30/23 4:41 am

Last edit: 03/24/25 7:29 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course	Engineering (ENGR) Physics (PH)
Programs referencing this course	AS.OSUINDENG: AS, Industrial Engineering, OSU AS.OSUBIOLENGR: AS, Biological Engineering, OSU AS.OITMECHENGR: AS, Mechanical Engineering, OIT AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU AS.PSUMECHENGR: AS, Mechanical Engineering, PSU AS.PSUMUSIC: AS, Music, PSU AS.TBIOLOGY: Biology (AST) AS.OSUBIOLOGY: AS, Biology, OSU NA.OTM: Oregon Transfer Module AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT AS.OSUARCHENGR: AS, Architectural Engineering, OSU AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST) AS.TBUSINESS: Business (AST) NA.CTM: Core Transfer Map AS.OSUCHEMENGR: AS, Chemical Engineering, OSU AS.OSUCIVILENGR: AS, Civil Engineering, OSU AS.PSUCIVILENGR: AS, Civil Engineering, PSU AS.PSUCOMPENGR: AS, Computer Engineering, PSU AS.PSUCOMPSCI: AS, Computer Science, PSU AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU AS.OSUECOLENGR: AS, Ecological Engineering, OSU AS.OITELECENGR: AS, Electrical Engineering, OIT AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU AS.PSUELECTENGR: AS, Electrical Engineering, PSU AAS.ELECTRONENGTECH: Electronics Engineering Technology AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT) AA.OTELEMED: Elementary Education (AAOT) AS.PSUENGLISH: AS, English, PSU AGS.GENERAL: Associate of General Studies AA.ENGLIT: English Literature (AAT) AS.OSUENVIRENGR: AS, Environmental Engineering, OSU AS.PSUENVIRENGR: AS, Environmental Engineering, PSU

Justification for this inactivation request

Credits/Hours/Instructional Method Change

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:48 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Sep 30, 2023 by Megan Feagles (megan.feagles)

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email	
Course Prefix	PH - Physics
Course Number	211
Department	Science
Division	Arts and Sciences
Course Title	General Physics With Calculus

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes
Only Pass/No Pass	No
Audit	Yes
CEU's	
Min Credit	5.00
Variable Credit	No
Max Credit	
Variable Credit Increment	

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	

Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class an out-of-class activity.

Course Description

A lab course covering vectors, motion, kinematics, forces and Newton's laws, gravity, conservation laws for momentum and energy, rotational motion, and oscillations.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites	
Corequisites	PH-211L and PH-211S

Prerequisites or Corequisites

MTH-252Z. ~~MTH-252.~~ WRD-090 with a C or better or placement in WRD-098

Recommended

Prerequisites

MTH-254. A year of high-school physics or PH-150

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Fall

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Related Instruction Area

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	analyze observed phenomenon in everyday life by applying conceptual understanding of the physics of classical mechanics; (SC1)
2	apply scientific investigation and inquiry to understand real-world events and scenarios that they have not encountered previously; (SC2)
3	solve many different types of problems dealing with kinematics, dynamics, and conservation laws; (SC1)(SC2)
4	solve problems and present their work to their peers; (SC1)
5	work collaboratively to solve problems (seminar) and investigate physical phenomenon through experimentation and inquiry (laboratory); (SC2)
6	think critically about new information presented to them, and examine the extent to which it fits within their current understanding of physical laws; (SC3)
7	use technology to conduct detailed investigations and measurements of prototypical physical phenomenon and discuss how experimental results relate to theoretical expectations. (SC1)

AAOT/ASOT General Education Outcomes Course Outline Mapping Chart

As a result of completing the AAOT/ASOT general education requirements, students will be able to:

WR: Writing Outcomes

Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences.

Locate, evaluate, and ethically utilize information to communicate effectively.

Demonstrate appropriate reasoning in response to complex issues.

SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

Respond to the needs of diverse audiences and contexts.

Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.	P
Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.	P

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

Critically analyze values and ethics within range of human experience and expression to engage more fully in local and global issues.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.	S
Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.	S
Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.	S

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Journal Writing
Writing Assignments

Other Assessment Tools

Major Topic Outline 1. Units and vectors. 2. Kinematics. 3. Forces and Newton's Laws of Motion. 4. Conservation laws. a. Energy and Work. b. Impulse and momentum. 5. Rotational motion. 6. Oscillations.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

	No
Percent of Course	0

Course Transferability

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s): General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s): General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s): General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

PSU - Portland State University

Comparable course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

UO - University of Oregon

Comparable course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

WOU - Western Oregon University

Comparable course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

Please attach documentation

Reviewer Comments

Course Change Request

Date Submitted: 03/24/25 7:29 am

Viewing: PH-212 : General Physics With Calculus

Last approved: 09/30/23 4:41 am

Last edit: 03/24/25 7:29 am

Changes proposed by: Megan Feagles (megan.feagles)

Catalog Pages referencing this course

Physics (PH)

Programs referencing this course

AS.OSUINDENG: AS, Industrial Engineering, OSU
AS.OSUBIOLENGR: AS, Biological Engineering, OSU
AS.OITMECHENGR: AS, Mechanical Engineering, OIT
AS.OSUSMECHENGR: AS, Mechanical Engineering, OSU
AS.PSUMECHENGR: AS, Mechanical Engineering, PSU
AS.PSUMUSIC: AS, Music, PSU
AS.TBIOLOGY: Biology (AST)
AS.OSUBIOLOGY: AS, Biology, OSU
NA.OTM: Oregon Transfer Module
AS.OITRNWNRGENGR: AS, Renewable Energy Engineering, OIT
AS.OSUARCHENGR: AS, Architectural Engineering, OSU
AS.TCOMPSCIESWO, AS.TCOMPSCIOSPSUO: Computer Science (AST)
AS.TBUSINESS: Business (AST)
NA.CTM: Core Transfer Map
AS.OSUCHEMENGR: AS, Chemical Engineering, OSU
AS.OSUCIVILENGR: AS, Civil Engineering, OSU
AS.PSUCIVILENGR: AS, Civil Engineering, PSU
AS.PSUCOMPENGR: AS, Computer Engineering, PSU
AS.PSUCOMPSCI: AS, Computer Science, PSU
AS.OSUCONENRMGT: AS, Construction Engineering Management, OSU
AS.OSUECOLENGR: AS, Ecological Engineering, OSU
AS.OITELECENGR: AS, Electrical Engineering, OIT
AS.OSUELCOMPENGR: AS, Electrical Engineering, OSU

In Workflow

1. **Curriculum Office**
2. **Curriculum Committee Approval**
3. Colleague

Approval Path

1. 03/24/25 7:48 am Megan Feagles (megan.feagles): Approved for Curriculum Office

History

1. Sep 30, 2023 by Megan Feagles (megan.feagles)

AS.PSUELECTENGR: AS, Electrical Engineering, PSU
AAS.ELECTRONENGTECH: Electronics Engineering Technology
AA.OREGONTRANSFER: Associate of Arts Oregon Transfer (AAOT)
AA.OTELEMED: Elementary Education (AAOT)
AS.PSUENGLISH: AS, English, PSU
AGS.GENERAL: Associate of General Studies
AA.ENGLIT: English Literature (AAT)
AS.OSUENVIRENGR: AS, Environmental Engineering, OSU
AS.PSUENVIRENGR: AS, Environmental Engineering, PSU

Justification for this inactivation request

Credits/Hours/Instructional Method Change

Reason for proposal

Is Topic Shell Course?

Are you the Faculty Contact Person?

Faculty Contact Email

Course Prefix	PH - Physics
Course Number	212
Department	Science
Division	Arts and Sciences
Course Title	General Physics With Calculus

Grading

Grade Scheme	Standard (STND)
Credit Type	Credit Course
Allow Pass/No Pass	Yes

Only Pass/No Pass	No
Audit	Yes

CEU's

Min Credit	5.00
Variable Credit	No

Max Credit
Variable Credit
Increment

Contact hours

Lecture	33.00
Lec/Lab	
Lab	
Activity	
Clinical	
Field	
CWE Seminar	
CPR	
Seminar	
Community Education/Drivers Ed	
Community Education/Adult	
Total	33
Proposed Effective Term	Summer 2025

I acknowledge that this course, for the average student, will be a time commitment of 3 hours per week per credit in combination of in-class and out-of-class activity.

Course Description

A lab course covering electricity, magnetism, DC and AC circuits, and electromagnetic radiation.

Type of Course (ACTI Code)

100 - Lower Division Collegiate

CIP Code

Select at least one of the following:

Discipline Studies

Select one of the following career areas:

Target Population:

Choose all that apply:

Reason for the Proposal

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Up to how many credits can this course be repeated to satisfy a degree requirement?

Course Requisites

Required

Prerequisites

MTH-252Z ~~MTH-252~~ and PH-211

Corequisites

PH-212L and PH-212S

Prerequisites or Corequisites

Recommended

Prerequisites

MTH-254

Corequisites

Prerequisites or Corequisites

Non-Course Requisites

Required

Recommended

Is Student Petition required?

No

Show course in Schedule: Print in Schedule

Hide course in catalog

No

When do you plan to offer this course?

Winter

Will this class use library resources?

Yes

Have you talked with a librarian regarding that impact?

No

Course Certifications

Is this a Related Instruction course?

No

Related Instruction

Are you going to seek General Education Certification after course approval?

Yes

General Education Outcome(s)

Sciences

Equivalent Courses

Equivalent Active Courses

Equivalent Inactive Courses

Student Learning Outcomes

Student Learning Outcomes

	Upon successful completion of this course, students should be able to:
1	analyze observed phenomenon in everyday life by applying conceptual understanding of the physics of electricity, magnetism and circuits; (SC1)
2	solve many different types of problems dealing with electrostatics, magnetostatics, and electric circuits; (SC1)(SC2)
3	apply scientific investigation and inquiry to understand real-world phenomenon that they have not encountered previously; (SC2)
4	solve problems and present their work to their peers; (SC1)
5	work collaboratively to solve problems (seminar) and investigate physical phenomenon through experimentation and inquiry (laboratory); (SC2)
6	think critically about new information presented to them, and examine the extent to which it fits within their current understanding of physical laws; (SC3)
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SP: Speech/Oral Communication Outcomes

Engage in ethical communication processes that accomplish goals.

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Build and manage relationships.

MA: Mathematics Outcomes

Use appropriate mathematics to solve problems.

P

Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

P

AL: Arts and Letters Outcomes

Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life.

SS: Social Science Outcomes

Apply analytical skills to social phenomena in order to understand human behavior.

SC: Science or Computer Science Outcomes

Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models, and solutions and generate further questions.

S

Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically examine the influence of scientific and technical knowledge on human society and the environment.

S

Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

S

Outcome Assessment Strategies

Outcomes Assessment Strategies

General Examination
Journal Writing
Writing Assignments

Other Assessment Tools

Major Topic Outline

1. Electric charge. 2. Electric fields. 3. Electric potential. 4. Current, resistance, and Ohm’s Law.
5. Magnetic fields. 6. Electromagnetic induction. 7. AC circuits. 8. Electromagnetic radiation.

Green Course Management

Does the content of this class relate to job skills in any of the following areas:

Increased Energy Efficiency

No

Produce Renewable Energy

No

Prevent Environmental Degradation

No

Clean up Natural Environment

No

Supports Green Services

No

Percent of Course 0

Course Transferability

OUS school to which the course will transfer

OIT - Oregon Institute of Technology

Comparable course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

websites have transfer equivalency lists (e.g., http://oregonstate.edu/admissions/main/baccalaureate-core-course-equivalencies-clackamas-community-college). Confirmed course is on the list.

OUS school to which the course will transfer

OSU - Oregon State University

Comparable course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

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OUS school to which the course will transfer

OSU-C - OSU-Cascade

Comparable course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

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OUS school to which the course will transfer

PSU - Portland State University

Comparable
course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

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OUS school to which the course will transfer

SOU - Southern Oregon University

Comparable
course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

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OUS school to which the course will transfer

UO - University of Oregon

Comparable
course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

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OUS school to which the course will transfer

WOU - Western Oregon University

Comparable
course(s)

General Physics with Calculus

How does it transfer?

general education or distribution requirement
required or support for major

Evidence of transferability

Other. Please explain.

Explanation of other evidence of transferability

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