New York City College of Technology, CUNY

CURRICULUM MODIFICATION PROPOSAL FORM

This form is used for all curriculum modification proposals. See the [Proposal Classification Chart](http://openlab.citytech.cuny.edu/collegecouncil/files/2014/08/2013-10-09-Proposal_Classification_Chart.pdf) for information about what types of modifications are major or minor. Completed proposals should be emailed to the Curriculum Committee chair.

|  |  |
| --- | --- |
| **Title of Proposal** | Prerequisite change for MAT 1180 and MAT 1190 |
| **Date** | 1/14/15 |
| **Major or Minor** | minor |
| **Proposer’s Name** | Neil Katz |
| **Department** | mathematics |
| **Date of Departmental Meeting in which proposal was approved** | 11/6/14 |
| **Department Chair Name** | Jonathan Natov |
| **Department Chair Signature and Date** | A description... |
| **Academic Dean Name** | Karl Botchway |
| **Academic Dean Signature and Date** | A description...1/14/15 |
| **Brief Description of Proposal**(Describe the modifications contained within this proposal in a succinct summary. More detailed content will be provided in the proposal body. | Students may not take MAT 1180 or MAT 1190 for credit if they have passed a higher level mathematics course. |
| **Brief Rationale for Proposal**(Provide a concise summary of why this proposed change is important to the department. More detailed content will be provided in the proposal body).  | The mathematics department has found that some students who have passed higher level mathematics courses in the sequence of courses leading to calculus are taking MAT 1180 or MAT 1190, courses aimed at non-science majors. Since MAT 1180 and MAT 1190 are not prerequisites to many higher level courses, students are currently not prevented from taking them for credit after passing higher level courses. |
| **Proposal History**(Please provide history of this proposal: is this a resubmission? An updated version? This may most easily be expressed as a list). | This is a new proposal. |

Please include all appropriate documentation as indicated in the Curriculum Modification Checklist.

**ALL PROPOSAL CHECK LIST**

|  |  |
| --- | --- |
| Completed CURRICULUM MODIFICATION FORM including: |  |
| * Brief description of proposal
 | X |
| * Rationale for proposal
 | X |
| * Date of department meeting approving the modification
 | X |
| * Chair’s Signature
 | X |
| * Dean’s Signature
 | X |
| Evidence of consultation with affected departmentsList of the programs that use this course as required or elective, and courses that use this as a prerequisite. | X |
| Documentation of Advisory Commission views (if applicable). | NA |
| Completed [Chancellor’s Report Form](http://openlab.citytech.cuny.edu/collegecouncil/files/2014/08/2013-10-09-Chancellor_Report_Quick_Reference_Guide1.doc). | X |

**Description of Proposal**

The following will be appended to the catalog description of MAT 1180 and MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375 or higher will not receive credit for this course.

**Rationale for Proposal**

It is a general principle of education that students should be encouraged to study a subject further, but that this study should be at an equal or higher level than in their previous courses. The mathematics department has found that some students who have passed higher level mathematics courses in the sequence of courses leading to calculus are taking MAT 1180 or MAT 1190, very basic courses aimed at non-science majors. Students who have passed higher level classes are neither required to take MAT 1180 or MAT 1190 by their programs, nor to satisfy general education requirements. They would not benefit from taking such a basic course. Since MAT 1180 and MAT 1190 are not prerequisites to many higher level courses, students are currently not prevented from taking these courses for credit.

**Evidence of consultation with affected departments**

Date: Thu, 18 Sep 2014 20:11:42 -0400
From: "Anne Zissu" <azissu@CityTech.Cuny.Edu>
To: "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Cc: "Henry Africk" <HAfrick@CityTech.Cuny.Edu>,
 "Nadia Benakli" <NBenakli@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

Dear Neil ,
I agree with the changes for the catalog. Thank you very much.
Best,
Anne

Original Message
From: Neil Katz
Sent: Thursday, September 18, 2014 19:56
To: Anne Zissu
Cc: Henry Africk; Nadia Benakli
Subject: minor curriculum change

Dear Anne,

The mathematics department wants to make a minor curriculum change
involving MAT 1190. The Business department's AAS in Marketing
Management and Sales and AAS in Fashion Marketing each list this course
as required, so I'm contacting you for your department's input.

The change will be to append the following to the catalog's course
description of MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

Date: Fri, 19 Sep 2014 17:10:12 -0400
From: "Joycelyn Dillon" <JDillon@CityTech.Cuny.Edu>
To: "Henry Africk" <HAfrick@CityTech.Cuny.Edu>,
 "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Cc: "Leonard Friedman" <LFriedman@CityTech.Cuny.Edu>,
 "Nadia Benakli" <NBenakli@CityTech.Cuny.Edu>,
 "Shantel Childs-Williams" <SChilds-Williams@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

Thank you Henry.

 Joycelyn Dillon, RDH, MA
Chair, Dental Hygiene Department
P201
New York City College of Technology
300 Jay Street, Brooklyn, NY 11201
718-260-5070
718-260-5069 (Fax)
jdillon@citytech.cuny.edu

>>> Henry Africk 9/19/2014 1:05 PM >>>
A minor curriculum change would be needed if MAT 1275 were accepted as
an alternative to MAT 1190.

Prof. Henry Africk, Chair
Mathematics Department N711
New York City College of Technology
300 Jay Street
Brooklyn, NY 11201
(718)260-5380

>>> Neil Katz 09/18/14 9:10 PM >>>
Dear Joycelyn,

Thanks for the quick response.

Yes we want to not allow credit for MAT 1190 because it is at a much
lower level than the ones listed.

If a student has taken MAT 1275, 1375, or any other course on the list
of those satisfying the Pathways Mathematical and Quantitative Reasoning
requirement, then they don't need to take MAT 1190.

MAT 1190 is a very basic level course that can be used as a
prerequisite for MAT 1272 or MAT 1280 but no other course. MAT 1275 is a
standard course in algebra (a small amount of which is covered in MAT
1190). MAT 1372 is a statistics course with a prerequisite of MAT 1375,
so any student that takes it will have taken MAT 1375 or higher. A small
amount of statistics is covered in MAT 1190.

I do not think you would need a minor curriculum change as a result of
this change. Your students would take either MAT 1190 or MAT 1375 (or
higher) but never both.

Let me know if you have other questions.

Best,

Neil

>>> Joycelyn Dillon 09/18/14 8:36 PM >>>
Hi Neil,
Here are my initial thoughts:
I'm not sure that this will work for our students since our catalog
statement
only allows for Mat 1190 or Mat 1375 or higher. I'm not sure how this
determination of "1375 or higher" was made, It was before my time in the
department. As you know 1180 used to be in place till recently.
I'm assuming that you are not allowing credit for 1190 because it is a
lower level course than those mentioned?
My understanding is that this change implies that if a student has
taken 1275 ,1372 or 1375, then 1190 is not necessary? (hence credit
won't be given for it?)
Are Mat 1275 and 1372 comparable in content to Mat 1190? How so?
This change on your part would mean that we would also need to do a
minor curriculum change.
Please let me know your answers, and I will then bring it to the
departmental curriculum committee.
Best,
Joycelyn

Joycelyn Dillon, RDH, MA
Chair, Dental Hygiene Department
P201
New York City College of Technology
300 Jay Street, Brooklyn, NY 11201
718-260-5070
718-260-5069 (Fax)
jdillon@citytech.cuny.edu

>>> Neil Katz 9/18/2014 8:05 PM >>>
Dear Joycelyn,

The mathematics department wants to make a minor curriculum change
involving MAT 1190. The Dental Hygiene department's AAS degree lists
this course as required, so I'm contacting you for your department's
input.

The change will be to append the following to the catalog's course
description of MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

Date: Fri, 19 Sep 2014 12:09:35 -0400
From: "Thomas Wilkin" <twilkin@CityTech.Cuny.Edu>
To: "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

Hi Neil. The proposal is fine with us.
Thanks
Tom

Sent from my iPhone

On Sep 18, 2014, at 7:59 PM, "Neil Katz" <nkatz@CityTech.Cuny.Edu>
wrote:

> Dear Professor Wilkin,
>
> The mathematics department wants to make a minor curriculum change
involving MAT 1190. The Career and Technology Teacher Education
department's BS degree lists this course as required, so I'm contacting
you for your department's input.
>
> The change will be to append the following to the catalog's course
description of MAT 1190:
>
> Students who already have credit for MAT 1275, MAT 1372, MAT 1375
> or higher will not receive credit for this course.
>
>
> Please let me know if you have any suggestions regarding this change.
>
> Best,
>
> Neil Katz
> Associate Professor
> Mathematics Department
> NYCCT
>
> e-mail: nkatz@citytech.cuny.edu
> phone: x5782

Date: Fri, 19 Sep 2014 21:03:27 -0400
From: "Margaret Rafferty" <mrafferty@CityTech.Cuny.Edu>
To: "David Smith" <DSMITH@CityTech.Cuny.Edu>,
 "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Cc: "Henry Africk" <HAfrick@CityTech.Cuny.Edu>,
 "Nadia Benakli" <NBenakli@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

I discussed this with Dean Smith today. I approve this change.

Margaret Rafferty DNP MPH MA
Chair, Department of Nursing
Associate Professor
New York City College of Technology
The City University of New York
300 Jay Street Pearl 505
Brooklyn, New York 11201
mrafferty@citytech.cuny.edu
Phone: (718)260-5668

>>> Neil Katz 09/18/14 8:11 PM >>>
Dear Peggy,

The mathematics department wants to make a minor curriculum change
involving MAT 1190. The Nursing department's AAS and BS degrees in
Nursing each list this course as required, so I'm contacting you for
your department's input.

The change will be to append the following to the catalog's course
description of MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

Date: Fri, 19 Sep 2014 09:32:36 -0400
From: "Anthony Sena" <ASena@CityTech.Cuny.Edu>
To: "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Cc: "Henry Africk" <HAfrick@CityTech.Cuny.Edu>,
 "Nadia Benakli" <NBenakli@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

I do not see a problem with the MAT 1275 or MAT 1375 because these
courses would fulfil our students math requirement. The math 1372 would
not meet the credits needed for our students since this is a 3 credit
course and we require 4 credits of math.

Anthony Sena
Assistant Professor, Chair
Dept. of Restorative Dentistry
NYC College of Technology
Room P409
300 Jay St.
Brooklyn, NY 11201
718-260-5137

>>> Neil Katz 9/18/2014 8:14 PM >>>
Dear Professor Sena,

The mathematics department wants to make a minor curriculum change
involving MAT 1180. The Restorative Dentistry department's AAS degree
in Dental Laboratory Technology lists this course as required, so I'm
contacting you for your department's input.

The change will be to append the following to the catalog's course
description of MAT 1180:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

Date: Wed, 24 Sep 2014 18:00:20 -0400
From: "Justine Pawlukewicz" <jpawlukewicz@CityTech.Cuny.Edu>
To: "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

Gotcha!
Thanks!
Justine Pawlukewicz Ph.D., CASAC
Associate Professor
Human Services Department
CUNY/NYC College of Technology
300 Jay Street. Brooklyn, NY 11201
718-260-5135
Human Services:
 ~Enhancing The Lives of Others~

>>> Neil Katz 09/22/14 8:26 PM >>>
Dear Justine,

The curriculum change is there to prevent students who have credit for a
higher level course going back and taking MAT1190 when they do not have
to. It has no effect at all on who is eligible to take MAT 1272 since
any student who has completed MAT 1180 or higher can take MAT 1272.

It seems that this change would not affect your program at all. Your
students can take any math course on the list of mathematics and
quantitative reasoning to satisfy that requirement. This means MAT 1190
or a higher level course, and this is exactly what is written as the
requirement for your program.

Best,

Neil

>>> Justine Pawlukewicz 09/22/14 6:58 PM >>>
The HUS Dept will accept any math higher than 1190. We would still like
this to be the case, since we get alot of bachelor transfers, from
community colleges that do not have the 4yr Human Service Degree.

We would still require Mat 1272, without accepting any course sub, since
this is a prereq. to our Reserach Course.

So, can we still please have any math higher than 1190?
Thanks
Justine

Justine Pawlukewicz Ph.D., CASAC
Associate Professor
Human Services Department
CUNY/NYC College of Technology
300 Jay Street. Brooklyn, NY 11201
718-260-5135
Human Services:
 ~Enhancing The Lives of Others~

>>> "Dr. Christine Thorpe" 09/22/14 6:40 AM >>>
Dear Neil,
Thank you for your message. At this time I do not have any suggestions
regarding this change. I have copied two of my colleagues on this
message who also work closely with the curriculum to chime in if
necessary.

Regards,
Christine

On Thu, Sep 18, 2014 at 8:07 PM, Neil Katz wrote:
Dear Christine,

The mathematics department wants to make a minor curriculum change
involving MAT 1190. The Health and Human Services department's AAS and
BS degrees in Human Services each list this course as required, so I'm
contacting you for your department's input.

The change will be to append the following to the catalog's course
description of MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

Date: Tue, 23 Sep 2014 10:45:14 -0400
From: "Reneta Lansiquot" <rlansiquot@CityTech.Cuny.Edu>
To: "Nina Bannett" <NBannett@CityTech.Cuny.Edu>,
 "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Cc: "Henry Africk" <HAfrick@CityTech.Cuny.Edu>,
 "Nadia Benakli" <NBenakli@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

Hi Neil,

I do not think the MAT 1190 modification will have any bearing on our
program.

Best,
Reneta

>>> Nina Bannett 09/18/14 8:01 PM >>>
Hi Neil,

I'm cc'ing Reneta Lansiquot here, since she is the Program Director. On
the face of it I don't see any problem, but I'm sure Reneta will weigh
in.

Best,
Nina

>>> Neil Katz 09/18/14 19:54 PM >>>
Dear Nina,

The mathematics department wants to make a minor curriculum change
involving MAT 1190. The English department's BS in Professional and
Technical Writing lists this course as required, so I'm contacting you
for your department's input.

The change will be to append the following to the catalog's course
description of MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

Date: Wed, 01 Oct 2014 15:50:34 -0400
From: "Concetta Mennella" <CMennella@CityTech.Cuny.Edu>
To: "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

That's fine beats me having to put in a course substitution

>>> Neil Katz 9/18/2014 8:09 PM >>>
Dear Connie,

The mathematics department wants to make a minor curriculum change
involving MAT 1190. The Law and Paralegal Studies department's AAS and
BS degrees in Legal Assistant Studies each list this course as required,
so I'm contacting you for your department's input.

The change will be to append the following to the catalog's course
description of MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

Date: Wed, 14 Jan 2015 09:03:34 -0500
From: "Neil Katz" <nkatz@CityTech.Cuny.Edu>
To: "Anthony Treglia" <ATreglia@CityTech.Cuny.Edu>
Cc: "Henry Africk" <HAfrick@CityTech.Cuny.Edu>,
 "Jonathan Natov" <JNatov@CityTech.Cuny.Edu>,
 "Nadia Benakli" <NBenakli@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

Dear Tony,

Thanks for the response. Sorry for not getting back to you sooner.

The reason for this change is that there are many students taking MAT
1190 right after passing higher level courses. In these cases MAT 1190
is not helpful to a student's progress, and not at an appropriate level
since MAT 1190 is at the level appropriate for students who have CUNY
certification but no more.

We can always make an exception when a
student has not taken math for a long time and wishes to satisfy the
degree requirements with MAT 1190. However taking MAT 1190 after MAT
1275 or higher should not be the normal official practice.
Please let us know the outcome of your departmental discussion.

Best,

Neil

>>> Anthony Treglia 9/29/14 4:09 PM >>>
Good Afternoon -

I think the difference between the MAT 1190 and the other math
courses is sufficient to permit both courses to count. While this may
not be how we would advise an incoming first-time freshman, many of our
students are older and some are returning to college after a prolonged
absence. In some cases where they may have taken MAT 1275 or its
equivalent elsewhere, the MAT 1190 remains valuable because of its
broader content and integration of communication skills, and also as a
math refresher.

Also, from a more practical viewpoint, students are often
registered long before the transfer credit is evaluated and awarded. It
would be problematic if students would not then receive credit for the
course. In the wording "who already have credit for ... " there may be
some room for interpretation but it would probably not be interpreted in
the more liberal sense.

We'll be having a department meeting soon but I wanted to get back to
you sooner.

Take care,

Tony

>>> Neil Katz 9/18/2014 8:04 PM >>>
Dear Tony,

The
 mathematics department wants to make a minor curriculum change
involving MAT 1190. The Environmental Control Technology department's
AAS degree in Environmental Control Technology and its BTech degree in
Facilities Management each list this course as required, so I'm
contacting you for your department's input.

The change will be to append the following to the catalog's course
description of MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

Date: Mon, 22 Sep 2014 16:26:34 -0400
From: "Charles Scott" <CSCOTT@CityTech.Cuny.Edu>
To: "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

Neil,
The ENT Dept. supports your change to the ENT1190 course description.
Our requiremtns state the following:
Mathematical and Quantitative Reasoning (1 course, 3 credits)
MAT 1190 or higher
Therefore the change has no impact on our requirements when a student
has already passed a higher level course.
Sincerely, Chip

Chip Scott
Professor, Chair of Entertainment Technology Dept.
NYC College of Technology, CUNY
300 Jay St., V205
Brooklyn, NY 11201
(718) 260-5588

>>> Neil Katz 9/18/2014 8:01 PM >>>
Dear Chip,

The mathematics department wants to make a minor curriculum change
involving MAT 1190. The Entertainment Technology department lists this
course as required for its BTech degree in Entertainment Technology and
for its BTech degree in Emerging Media Technology, so I'm contacting you
for your department's input.

The change will be to append the following to the catalog's course
description of MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

Date: Mon, 22 Sep 2014 09:28:13 -0400
From: "Elizabeth Schaible" <ESchaible@CityTech.Cuny.Edu>
To: "Neil Katz" <NKatz@CityTech.Cuny.Edu>
Cc: "Henry Africk" <HAfrick@CityTech.Cuny.Edu>,

 "Nadia Benakli" <NBenakli@CityTech.Cuny.Edu>
Subject: Re: minor curriculum change

Dear Neil,

When you have a chance can we chat about this so I can fully understand
the implications of the change.

Thanks,

Liz

>>> Neil Katz 9/18/2014 8:09 PM >>>
Dear Liz,

The mathematics department wants to make a minor curriculum change
involving MAT 1190. The Hospitality Management department's AAS and BS
degrees in Hospitality Management each list this course as required, so
I'm contacting you for your department's input.

The change will be to append the following to the catalog's course
description of MAT 1190:

Students who already have credit for MAT 1275, MAT 1372, MAT 1375
or higher will not receive credit for this course.

Please let me know if you have any suggestions regarding this change.

Best,

Neil

**Programs that use this course as required or elective**

MAT 1180

* Associate in Applied Science in Dental Laboratory Technology

MAT 1190

* Associate in Applied Science in Accounting
* Associate in Applied Science in Marketing Management and Sales
* Associate in Applied Science in Fashion Marketing
* Bachelor of Science in Career and Technical Teacher Education
* Associate in Applied Science in Dental Hygiene
* Associate in Applied Science in Human Services
* Bachelor of Science in Human Services
* Associate in Applied Science in Hospitality Management
* Bachelor of Technology in Hospitality Management
* Associate in Applied Science in Legal Assistant Studies
* Bachelor of Science in Legal Assistant Studies
* Associate in Applied Science in Nursing
* Bachelor of Science in Nursing
* Associate in Science in Art and Advertising Design
* Bachelor of Technology in Communication Design
* Associate in Applied Science in Graphic Arts Advertising Production Management
* Bachelor of Technology in Graphic Arts Production Management
* Bachelor of Technology in Entertainment Technology
* Bachelor of Technology in Emerging Media Technology
* Associate in Applied Science in Environmental Control Technology
* Bachelor of Technology in Facilities Management
* Bachelor of Science in Professional and Technical Writing
* Associate in Arts in Liberal Arts

**Courses that use this as a prerequisite or co-requisite**

MAT 1180

* MAT 1272 Statistics
* MAT 1280 Quantitative Mathematics
* SBS 2000 Research Methods for the Social and Behavioral Sciences
* DEN 2413 Introduction to Dental Public Health
* HSA 3630 Health Care Finance and Accounting Management
* HSA 4910 Introduction to Public Health Administration
* VCT 1101 Ophthalmic Materials and Laboratory I
* VCT 1105 Principles of Optics I

MAT 1190

* MAT 1272 Statistics
* MAT 1280 Quantitative Mathematics
* SBS 2000 Research Methods for the Social and Behavioral Sciences
* HSA 3630 Health Care Finance and Accounting Management
* HSA 4910 Introduction to Public Health Administration
* PHYS 1002 Introduction to the Physics of Natural Disasters
* PHYS 1422 Foundations of Physics

**Section AV: Changes in Existing Courses**

**AV.1. Mathematics Department**

**MAT 1180 Mathematical Concepts and Applications**

|  |  |  |  |
| --- | --- | --- | --- |
| **From:**  |  | **To:**  |  |
| **Description:** | ~~Topics are selected from algebra, geometry, graphs of functions, inequalities, probability and statistics.~~~~\*Credit will not be given for both MAT 1175 and MAT 1180.~~ | **Description:** | Topics are selected from algebra, geometry, graphs of functions, inequalities, probability and statistics.\*Credit will not be given for both MAT 1175 and MAT 1180. Students who already have credit for MAT 1275, MAT 1372, MAT 1375 or higher will not receive credit for this course. |

**Rationale:** The mathematics department has found that some students who have passed higher level mathematics courses in the sequence of courses leading to calculus are taking MAT 1180, a course aimed at non-science majors.

**Section AV: Changes in Existing Courses**

**AV.1. Mathematics Department**

**MAT 1190 Quantitative Reasoning**

|  |  |  |  |
| --- | --- | --- | --- |
| **From:**  |  | **To:**  |  |
| **Description:** | ~~Students develop and apply mathematical, logical, critical thinking, and statistical skills to solve problems in real-world contexts. They acquire skills in the fields of algebra, geometry, probability, statistics, and mathematical modeling. The course incorporates opportunities within the classroom to develop students’ reading, writing, oral, and listening~~ | **Description:** | Students develop and apply mathematical, logical, critical thinking, and statistical skills to solve problems in real-world contexts. They acquire skills in the fields of algebra, geometry, probability, statistics, and mathematical modeling. The course incorporates opportunities within the classroom to develop students’ reading, writing, oral, and listening.Students who already have credit for MAT 1275, MAT 1372, MAT 1375 or higher will not receive credit for this course. |

**Rationale**: The mathematics department has found that some students who have passed higher level mathematics courses in the sequence of courses leading to calculus are taking MAT 1190, a course aimed at non-science majors.