# Read: Amortized Loans

## Amortized Loans

Excel can help you forecast and predict
critical information about loan payments
and interest.

You can use Excel to build an
amortization schedule

In this module, you will examine amortization schedules and in the course project, you will create
your own amortization table. Professor Haeger will explain what amortization schedules are and how
they work.

What kinds of loans are amortized?

- Business loans
- Home equity
- Mortgage
- Refinance
- Student loans
- Car/auto loan
- Debt consolidation

When you're trying to make decisions about loans, either on behalf of your organization or for
yourself in your personal life, you will want to take into account the loan amount, the loan term, the
interest rate, and the date of first payment, and there may be other critical variables you want to take
into account. You will certainly need to know how much must be paid in regular installments and the
effect that any change in the interest rate will have. Lenders will use the same information to try to
determine whether it's going to be profitable for them to grant you (or your business) a loan at a
certain interest rate.

## Example: A $50,000 Business Loan

Let's say that on January 1, 2020, your organization borrows $50,000 for a loan period of two years
and at an interest rate of 5%. You can use Excel to develop an **amortization schedule,** which will
plot out the payments and dates. While every payment amount will be the same, the amount of the
payment that is allocated for principle and interest will change. In our simple example, it would look
like this:

| Payment Date | Payment | Principal | Interest | Total Interest | Balance |
|---|---|---|---|---|---|

| Feb-20 | $2,193.57 | $1,985.24 | $208.33 | $208.33 | $48,014.76 |
| Mar-20 | $2,193.57 | $1,993.51 | $200.06 | $408.39 | $46,021.26 |
| Apr-20 | $2,193.57 | $2,001.81 | $191.76 | $600.15 | $44,019.44 |
| May-20 | $2,193.57 | $2,010.16 | $183.41 | $783.56 | $42,009.29 |
| Jun-20 | $2,193.57 | $2,018.53 | $175.04 | $958.60 | $39,990.76 |
| Jul-20 | $2,193.57 | $2,026.94 | $166.63 | $1,125.23 | $37,963.81 |
| Aug-20 | $2,193.57 | $2,035.39 | $158.18 | $1,283.41 | $35,928.43 |
| Sep-20 | $2,193.57 | $2,043.87 | $149.70 | $1,433.12 | $33,884.56 |
| Oct-20 | $2,193.57 | $2,052.38 | $141.19 | $1,574.30 | $31,832.18 |
| Nov-20 | $2,193.57 | $2,060.94 | $132.63 | $1,706.94 | $29,771.24 |
| Dec-20 | $2,193.57 | $2,069.52 | $124.05 | $1,830.98 | $27,701.72 |
| Jan-21 | $2,193.57 | $2,078.15 | $115.42 | $1,946.41 | $25,623.57 |
| Feb-21 | $2,193.57 | $2,086.80 | $106.76 | $2,053.17 | $23,536.77 |
| Mar-21 | $2,193.57 | $2,095.50 | $98.07 | $2,151.24 | $21,441.27 |
| Apr-21 | $2,193.57 | $2,104.23 | $89.34 | $2,240.58 | $19,337.04 |
| May-21 | $2,193.57 | $2,113.00 | $80.57 | $2,321.15 | $17,224.04 |
| Jun-21 | $2,193.57 | $2,121.80 | $71.77 | $2,392.92 | $15,102.24 |
| Jul-21 | $2,193.57 | $2,130.64 | $62.93 | $2,455.84 | $12,971.59 |
| Aug-21 | $2,193.57 | $2,139.52 | $54.05 | $2,509.89 | $10,832.07 |
| Sep-21 | $2,193.57 | $2,148.44 | $45.13 | $2,555.03 | $8,683.64 |
| Oct-21 | $2,193.57 | $2,157.39 | $36.18 | $2,591.21 | $6,526.25 |
| Nov-21 | $2,193.57 | $2,166.38 | $27.19 | $2,618.40 | $4,359.87 |
| Dec-21 | $2,193.57 | $2,175.40 | $18.17 | $2,636.57 | $2,184.47 |
| Jan-22 | $2,193.57 | $2,184.47 | $9.10 | $2,645.67 | $0.00 |