SUBDOMAIN 319.1 - ACCOUNTING & FINANCE
SUBDOMAIN 319.2 - INFORMATION TECHNOLOGY

Competency 319.1.3 Capital Budgeting Analysis - *The graduate correctly applies time value of money techniques and techniques that ignore present value for capital investment decisions.*
Competency 319.2.1 Technology Tools *- The graduate uses information technology tools for specified business purposes.*
Competency 319.2.5 Information Management *- The graduate selects appropriate technology applications to manage information and make decisions in given situations.*

Objectives:
319.1.3-01: Calculate net present value based on a given set of facts.
319.1.3-02: Apply the results of a net present value calculation to a given decision situation.
319.1.3-03: Calculate internal rate of return based on a given set of facts.
319.1.3-04: Apply the results of an internal rate of return calculation to a given decision situation.
319.1.3-05: Calculate the period of time required to recoup the money expended for new equipment in a given situation.
319.1.3-06: Calculate the accounting rate of return based on a given set of facts.
319.1.3-07: Explain the relationship of the accounting rate of return to the internal rate of return for the same capital investment alternative.
319.1.3-08: Calculate net cash flow in a given situation.
319.1.3-09: Explain the impact of depreciation on net cash flow.
319.1.3-10: Explain the role of the weighted average cost of capital in capital budgeting analysis.
319.2.1-04: Produce a computer-based presentation on a business topic.
319.2.5-05: Demonstrate the appropriate use of specified software application in a given situation.

It is imperative that you enter your first initial and last name in the fields designated on the template. Your work and results will be based on an individualized dataset that will auto load in the template when you enter your first initial and last name. Your work will not be correctly graded if you fail to complete these fields.

Introduction:

Entrepreneur D supplements income from a professional practice by investing in start-up and other business opportunities that meet specific investment criteria. Entrepreneur D operates all of these extra business activities as a single limited liability company and utilizes discounted cash flow analysis as a primary tool for evaluating each potential investment. There is an opportunity to purchase the patent for a newly invented gardening tool that Entrepreneur D would manufacture and sell on a wholesale basis. Entrepreneur D has asked you to prepare an analysis of this investment opportunity and make a recommendation regarding the course of action to take.

Given:

Entrepreneur D plans to retire from professional practice and cease all business activities nine years from now. The plan for the garden tool is to produce and sell it for eight years

and then sell the patent and production rights to a national company. Entrepreneur D has negotiated a tentative lease on a building that is well suited for this manufacturing process. The building must be remodeled to meet manufacturing needs, and then it must be restored to its original configuration at the end of the eight-year lease. At that time Entrepreneur D will be able to sell some of the non-specialized equipment (e.g., forklifts) for small salvage values.

- Building remodeling and new equipment purchases will require a front-end investment. The remodeling and equipment costs will be capitalized and depreciated over the eight-year period as one depreciation calculation using straight line depreciation. Realizable salvage value from disposing of the equipment at the end of eight years is estimated at approximately $60,000. There is no salvage value for the remodeling improvements. The remodeling cost is given on the template in your individualized dataset.
- Additional working capital will be required for business operations. The working capital required is given on the template in your individualized dataset.
- Estimated annual cash receipts from tool sales are forecasted for the eight years of expected operations. The expected cash receipts are given on the template in your individualized dataset.
- Estimated cash expenses for materials, salaries, supplies, utilities, and other cash expenses are projected for each of the eight years of expected operations. The expected cash expenses are given on the template in your individualized dataset.
- The lease on the building requires that it be restored to its original configuration at the end of the expected eight years of operation. The estimated restoration cost s number is given on the template in your individualized dataset.
- The working capital tied up in this project will become available for other types of investments at the end of the eight-year period.

Entrepreneur D has asked you to assume a 12% applicable weighted average cost of capital.

Entrepreneur D has also asked you to assume a combined federal and state income tax rate. The tax rate is given on the template in your indvidualized dataset.

Task:

A. Complete the attached "Capital Budgeting Template" by doing the following:
   1. Calculate the net cash flow that should be used for each year in the discounted cash flow analysis.
   2. Calculate the net present value (NPV) of this project using a discount rate equal to the company's weighted average cost of capital. Round all dollar amounts to the nearest whole dollar.
   3. Calculate the expected yield on the project using the discounted cash flow internal rate of return (IRR) method. Round all dollar amounts to the nearest whole dollar.
   4. Calculate the accounting rate of return for this project.
   5. Calculate the unadjusted payback period. State your answers in years and months.

B. Prepare a computer-based presentation in which you do the following:
   1. Identify what the correct net cash flow for the second year would be if all cash expenses were as described in the scenario but there were no depreciation expense.
      a. Explain the impact of depreciation on net cash flow for the second year.
   2. Based upon your NPV analysis in part A2, make a recommendation to Entrepreneur D regarding what decision to make.
      a. Explain why this is an appropriate action.
   3. Based upon your IRR analysis in part A3, make a recommendation to Entrepreneur D

regarding what decision to make.
   a. Explain why this is an appropriate action.
4. Explain why the accounting rate of return on this project is different from the internal rate of return for the same capital investment.
5. Explain the relative significance of the unadjusted payback period in this decision situation.
6. Explain how the weighted average cost of capital should be used in capital budgeting analysis when utilizing the NPV method.
7. Explain how the weighted average cost of capital should be used in capital budgeting analysis when utilizing the IRR method.

C. When you use sources, include all in-text citations and references in APA format.

Note: For definitions of terms commonly used in the rubric, see the attached Rubric Terms.

Note: When using sources to support ideas and elements in a paper or project, the submission MUST include APA formatted in-text citations with a corresponding reference list for any direct quotes or paraphrasing. It is not necessary to list sources that were consulted if they have not been quoted or paraphrased in the text of the paper or project.

Note: No more than a combined total of 30% of a submission can be directly quoted or closely paraphrased from sources, even if cited correctly. For tips on using APA style, please refer to the APA Handout web link included in the General Instructions section.
Here are some helpful APA resources:
http://www.apastyle.org
http://www.citationmachine.net
http://owl.english.purdue.edu/owl/resource/560/01